THE NEW YORK STATE

Conservationist

February-March 1952

STATE OF NEW YORK
CONSERVATION DEPARTMENT

Forest Preserve lands in the High Peak Country. A majority of our citizens believes that all Preserve holdings in the Adirondacks and Catskills have this general character: Forever Wild.

Forever Wild

TWO ASPECTS OF THE FOREST PRESERVE

A ¼-acre lot between houses, Saratoga County. You pay taxes on this as part of the Forest Preserve. According to the Constitution, it cannot be "leased, sold or exchanged".

BAMBI

Last spring a spotted fawn stumbled weakly into a farmyard near the Town of Bradford, in Steuben County. The owners of the farm took care of it, gave it some milk and then led it back into the woods and let it go. But the fawn soon returned to the farm and proceeded to take up more or less permanent residence there, although it came and went as it pleased.

Inevitably, it acquired the name of Bambi. Bambi soon became a local pet and often wandered into town, once visiting the local school and many times the local ice cream parlor, where handouts were generous and tasty.

Last November 15 the fawn walked into the general store in Bradford. In view of the approaching hunting season, the storekeeper's wife put a big, bright red ribbon around Bambi's neck, although everybody knew that only bucks would be legal game when the season opened. So that afternoon the fawn went back to the farm sporting a very conspicuous neck piece.

Later that same afternoon, a car drove up to the farm, some men got out, the fawn was shot and killed. By 4 a.m. the following morning, Assistant District Game Protector Canfield and Protectors Dean and Fleishman had rounded up: Leon Max Stone, Eugene Smalt, Edward Smalt (all of Bath), and James W. Frye of Bradford. All were arraigned before Justice of the Peace Herbert A. Johnston of Savona and given maximum fines.

But the damage, of course, had been done.

In reviewing last fall's hunting season, the incident reported above is merely a case in point; never in the memory of anyone here in the Department have there been so many authenticated reports of indiscriminate, wanton, hard-hearted, illegal killing. The evidence is all too plain: nowhere in the State were doe deer legal game, yet thousands of them now lie rotting in the woods. We're not guessing; we know.

Sportsmen—and we do mean you—just what do you intend to do about this sort of thing?

There's no point in trying to toss this problem into the Department's lap. The Department already spends a third of your license fee on law enforcement. And you can't expect the Legislature to solve it for you either, with stiffer fines and penalties. The Department is now sponsoring a bill to make any illegal doe shooting an indictable misdemeanor, like jacking, and we hope the Legislature will pass it. But:

The problem is one of personal conduct, morals and ethics. We cannot hire enough Game Protectors to supervise the personal conduct of half a million hunters, nor can the Legislature make good sportsmen.

You who *are* good sportsmen, this is *your* problem. You can, of course, refuse to do anything about it—just look the other way and pretend it's none of your business what the other fellow does. But as the posting signs go up, as the gates to free public hunting swing closed—don't say you didn't have fair warning.

The good sportsman must be his brother's keeper.—Editor

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STATE OF NEW YORK
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OUR FOREST PRESERVE

In the preceding issue of this magazine, the Conservation Department initiated a discussion of the Forest Preserve in the belief that such a discussion would eventually lead to better management of this property. The Department's objectives and beliefs in this respect remain unchanged, and the discussion continues. Having presented in the previous issue what we consider pertinent facts about the Forest Preserve, as well as the Department's position with regard to them, we now publish the opinions of informed or interested leaders outside of the Department. It will be obvious that these opinions have not been edited, and that many of them do not conform with those of the Department. The discussion will be continued in our next issue, in which there will also appear a summary of the Department's views, as well as ideas from new contributors.

By Gustav A. Swanson

Head, Department of Conservation, Cornell

Dear Editor:

YOU have asked for an expression of my views, or some of them, on the Forest Preserve controversy. In my three years in the State I have heard and read a good deal about the Forest Preserve, and of course have visited it, but I still feel quite unfamiliar with much of the background. The problem is so complex and controversial that I should have preferred to take more time for serious study before presenting my views, but perhaps some comments based chiefly on my experiences in other parts of the country will be relevant to the present discussion.

I am, of course, thoroughly sympathetic with the constitutional objective to preserve "forever wild" forest lands in the Adirondacks and Catskills for enjoyment of future generations. We owe a greater debt to the farsighted predecessors who framed the constitutional safeguard than could possibly have been foreseen fifty or sixty years ago. In our present-day civilization the quality of recreation provided only by wilderness country is more important than ever before.

But should we consider the present constitutional provision so perfect as to thwart any attempts to improve it? Should we abhor the thought that it be examined carefully in the hope of making the Forest Preserve even more valuable and more safe in the future than it has been in the past? Certainly not. It is a heritage worthy of the most critical study by the wisest men we can find, and I am confident that from such a study improvements could result. Possibly the new Joint Legislative Committee on Natural Resources could conduct such a study; possibly it should be the sole responsibility of a special legislative committee. In any event, objective consideration is needed.

I shall mention a few points which I would consider worthy of study, but first let me reiterate and emphasize what Seagears and Mulholland wrote in the December-January CONSERVATIONIST: "Any proposal should leave nothing whatever to the future judgment of individuals concerning the use of present and future Forest Preserve lands." The safeguards should remain in the Constitution, and they should be specific. I do not, for example, like Article XIV, Section 2, where it provides ". . . for the use of not exceeding three per centum of such lands for the construction and maintenance of reservoirs . . . (among other uses) to regulate the flow of streams." It is too easy to adapt this phrase ". . . to regulate the flow of streams" to projects seriously inimical to the dedicated purpose of the Forest Preserve, and I should feel safer if it were deleted. Any proposal for future reservoirs in the Preserve "to regulate stream flow" should require specific amendment to the Constitution, as has been true for the ski-runs and several highway extensions like the one up Whiteface Mountain.

The greatest inconsistency in the present constitutional safeguards for the Forest Preserve lies in applying exactly the same provisions to all State land within the "blue line" whether it is truly wild land, or thoroughly tamed; whether it is primeval forest, or logged and burned; whether it adjoins a paved highway or is miles from a road of any kind; whether it is a 100,000-acre block with 99 per cent State ownership, or the isolated quarter-acre weed patch adjacent to the public dump which you mentioned in the last issue of THE CONSERVATIONIST.

It is clearly foolish to apply exactly the same provisions to these opposite extremes, and that is why I like the principle of the "zoning" suggested by Seagears and Mulholland in the last CONSERVATIONIST. But I should like to carry the thought a bit further. The principle has been used with great success in other places. The Superior National Forest in Minnesota, where I have spent much time and taken many priceless wilderness canoe trips, has a gross area of about three and three-fourths million acres, about 30 per cent of it privately owned. Recreation is the most important of its uses—that and watershed protection—as in the Forest Preserve. In recognition thereof three separate roadless areas aggregating 1,079,430 acres have been designated. Travel here is by primitive means, primarily canoe routes and foot-trails. The airplane, a particularly pernicious violator of the character of wilderness country, has been curbed by the first Air Space Reservation ever created in this country to protect wilderness. Established by Presidential order, it prohibits all flying below 4,000 feet elevation except for emergency or administrative purposes.

The Forest Service has recognized that any privately owned land within wilderness areas is a constant threat to their character, and strenuous efforts have been made to acquire as much of it as possible. At latest reports only 57,000 acres of private lands, or less than 6 per cent, remained in the roadless areas.

The remainder of the Superior, outside the roadless areas, is still of prime value for recreation, although it has roads, developed camp grounds, picnic sites, and some sustained yield logging. The Shipstead-Nolan Act of 1930 prohibits any substantial change in existing water levels, and reserves from cutting all shoreline timber on federal lands within the area, and the state soon followed suit, so the logging permitted is generally not obtrusive, and most vacationists using the Forest are not aware of its existence. Such logging as is carried on produces some income, stabilizes the livelihood of a good many local people who are otherwise dependent upon the summer tourist trade, and not least, the logging itself im-

proves conditions for deer and grouse, and thus makes the Forest more productive of game for both hunter and the summer tourist.

As an aid in consolidating land ownerships within the Superior, for ease and efficiency of administration and to preserve the appropriate character of the Forest, the Forest Service has made excellent use of its authority to exchange lands. In this way it has managed to acquire, at costs within reason, many strategically located parcels of land both within and without the roadless area. The New York Constitution prohibits the exchange of any Forest Preserve lands, but properly used, this could be as useful a device to aid in consolidating State ownership in important areas as it has been in the Superior. It appears unlikely that many of the isolated tracts of State land within the 16 Forest Preserve counties will ever be amalgamated into the main Forest Preserve by purchase of the hundreds of thousands of acres of intervening private land, so it would seem useful to be permitted to use them in exchange for lands more strategically located.

In short, I am convinced that we can learn from the experience in other areas where wilderness values are being preserved, and that *properly* considered modifications of our present constitutional safeguards could increase the value of the Forest Preserve and strengthen its wilderness character. I sincerely hope that those charged with considering any such changes have outstanding wisdom and guidance, because their responsibility will be a heavy one.

Sincerely,

GUSTAV A. SWANSON

WILD FOREST LAND

By Paul Schaefer

A Director of the N. Y. S. Conservation Council

THE most eloquent and compelling arguments against lumbering the Forest Preserve in the Adirondacks and Catskills are to be found in the mountains themselves. Pillaged and ravished and burned by the lumberman who managed to cut 96 per cent of the entire area of both parks before the State obtained title, we were bequeathed a heritage of stumps, seared mountains and dry streambeds in much of the area we purchased from him.

When the protective mantle of Article VII Section 7 of the Constitution was thrown over all State lands in 1894, it was terribly late insofar as the preservation of critically important watershed forests were concerned. But it was not *too* late to accomplish important results.

For the lumberman for the most part took only the softwoods such as pine, spruce, hemlock and balsam from mixed forests containing magnificent hardwood stands of birch, maple and other deciduous trees. As the years rolled by, Nature, aided by the law which decreed that such lands "be forever kept as wild forest lands" slowly healed the scars, recalled the stumps and treetops to the soil and transformed lumbered areas into regions of great beauty.

Today, in both the Adirondacks and Catskills we have mountain, lake and river regions where primitive conditions have returned and where one can walk among forest giants and sense that tranquillity obtainable only in the wild forest, away from the sights and sounds and hustle of this mechanized civilization.

To allow the destruction of the wild character of these quiet forests and lovely lakes and wild rivers is the crux of the questions posed by this magazine.

In a special report dated 1944, the Ostertag Joint Legislative Committee reported that approximately one million acres of the Forest Preserve's 2,400,000 *had no merchantable timber on them.* Add to this the 250,000 acres leveled by the hurricane of 1950 and *now being lumbered.* Then add the critically important forests on the steep slopes of our mountains—forests that grow on soil a foot thin or less—guarding the sources of our rivers. To this vast acreage add the acreage of our 1500 lakes and rivers, with their shores, and the forests along thousands of miles of roads in these parks. How relatively small the area is that remains, and yet how vital to the unique wild character of the Forest Preserve!

Said the editor of the *Tupper Lake Free Press* recently:

"Tupper Lake had a grandstand seat for one of the first Adirondack forestry experiments, back in 1898 when the legislature turned over 30,000 acres out around Cross Clearing to Cornell University's School of Forestry. About 6000 acres were cut on a selective basis, after which the wind blew down the trees left standing, and fire finished off

ABOUT RESERVOIRS:

The subject of river regulating reservoirs was not included in our discussion of the Forest Preserve because it has been, and continues to be, the object of special studies by the Joint Legislative Committee on River Regulation, created for that express purpose by the Legislature.

Incidentally, my stand on the proposed Higley Mountain and Panther Mountain reservoirs has been deliberately misrepresented by some who attempt to use it to show that I am against the Forest Preserve. These are the facts—all a matter of record:

I publicly opposed the Higley Mountain site and used my personal influence to secure its abandonment. This, as everyone knows, was actually accomplished through the personal intervention of the Governor. Neither one of us had official jurisdiction.

The Panther Mountain site was then proposed and many foes of the Higley site immediately transferred their attack to the new proposal. I saw at once that the real question at issue was not Higley, Panther or any other specific site but rather the question of whether, as a matter of public policy, any further reservoirs should be built in the Forest Preserve. I was requested to kill the project, although I had no authority to do so. When that was understood, I was then asked to contrive some way to "pigeon hole" it, which I refused to try to do—because I don't believe good government can be achieved by erecting bureaucratic road blocks at the whim of an administrator. Rather, because fundamental public questions were involved, I favored a careful legislative study of them. The Governor concurred, and made a similar recommendation. The Legislature agreed by creating the Joint Legislative Committee on River Regulating, previously referred to. I still think this approach to the problem was right—and subsequent developments so attest. If I had to do it over I would take the same course and make the same recommendation.

ABOUT PARKS:

Opinions and recommendations, as expressed by the State Council of Parks in its report for the 1951 Red Book, have been represented in some quarters as reflecting the intentions of the Conservation Department with regard to the Forest Preserve. It should be pointed out that the State Council of Parks is an autonomous agency, distinct from the Division of Parks within this Department, and its recommendations are not subject to review by me.

—PERRY B. DURYEA

the job, leaving a mess which still shows the effects a half century later. That happened a long time ago—but the experiment was carried out along the same lines recommended today—and it could happen again."

To pierce our scattered wild places with a network of lumber roads, to destroy the quiet of the woods with the roar of bulldozers, chain saws and trucks, and to eliminate "mature forest trees" from the Adirondack and Catskill Forest Preserve regions is to destroy the most precious and irreplaceable natural resource New York State possesses.

We want to continue to walk through wild forest lands, and we want our children to have similar opportunities. We absolutely refuse to become a party to the exchange of the forests we now possess for a limbo of stumps and lumber debris.

It is a simple truth that lumbering in any form is incompatible with wild forest land as stipulated in the Constitution and interpreted by our highest courts. To uphold the one is to deny the other, and no amount of argument or discussion can bring such opposites to a common ground.

It is inferred by several Conservation Department writers that public campsites and the construction of trails and lean-to's is illegal. That is simply not so, since the Courts and the Attorneys General have given many sensible rulings on these matters and have permitted all things necessary to the proper use and protection of the Forest Preserve consistent with the original concept.

Justice Harold Hinman of the Supreme Court has given this interpretation of the Constitution;

"Giving to the phrase 'forever kept as wild forest lands' the significance which the term 'wild forest' bears, we must conclude that the idea intended was a health resort and playground with the attributes of a wild forest park as distinguished from other parks so common to our civilization. We must preserve it in its wild state, its trees, its rocks, its streams. It was to be a great resort for the free use of the people in which nature is given free reign. Its uses for health and pleasure must not be inconsistent with its preservation as forest lands in a wild state. It is essentionally a quiet and healthful retreat from the turmoils and artificialities of a busy urban life."

Hundreds of thousands of people annually use and enjoy the Forest Preserve within this concept of the Supreme Court. It must be remembered, however, that only 39 per cent of the Adirondack Park and 43 per cent of the Catskill Park come within this concept. All the rest is subject to any kind of commercialization.

The Forest Preserve is *not* locked up!

A thousand miles of paved highway and several thousand miles of secondary roads provide easy primary access to State lands in the Adirondacks and Catskills. Additional thousands of miles of good forest trails permit hunters, fishermen and hikers to reach virtually all the lakes and streams not accessible by highway.

The commercial facilities which are so thoroughly interspersed throughout the parks adjoining State holdings are, or can be made adequate for whatever the public use requires.

More than 30,000,000 people live within a day's auto journey of the Forest Preserve. The pressure on our scattered remnants of wilderness is tremendous, and will become greater. Additional public campsites, trails and lean-to's will be built, and legally so, to care for these needs.

What we really need is *more, not less* land devoted to the multiple uses possible under the existing Constitution. We can then provide maximum benefits to the increasingly large number of people who are being attracted to these magnificent regions by their wild forest character, an element which is vanishing from the American landscape with appalling rapidity.

By John E. Hammett

Chairman, Committee for the Conservation of Forests and Wildlife, Camp Fire Club of America

Editor, The Conservationist
Dear Sir:

YOUR editorial in the October-November, 1951 issue of THE CONSERVATIONIST was the subject of much earnest discussion at recent meetings of the Committee for the Conservation of Forests and Wildlife of the Camp Fire Club of America. Our Committee feels very strongly on the subject, and we thought it appropriate to acquaint you with our views.

Your suggestion that the New York State Constitution is an antiquated instrument, in need of general revision to bring it up-to-date, ignores the fact that the present Constitution is comparatively new, having been reviewed in its entirety in 1938 by a Constitutional Convention held for that very purpose. The "forever wild" clause of Article XIV of the present Constitution, which you now challenge, is identical with that clause as adopted by vote of the People, following its unanimous proposal by the Constitutional Convention of 1894. Thus it appears that the provision which you seem to think requires amendment "to adjust it to our current needs—and so make it work" not only has stood the test of time, but was re-adopted when the Constitution as a whole was up for revision in 1938. Indeed, the first sentence of the present Section 3, added in 1938, serves to strengthen the whole Article XIV. Many constitutional amendments have been made since 1938, but none affecting the "forever wild" provisions. This, we assert, indicates the will of the People to preserve their heritage, in spite of much selfish propaganda in the opposite direction.

Referring now to the four questions which the Department propounds, our Committee has studied each one of them carefully and has arrived at the following conclusions. In the interest of brevity, I shall not repeat your questions in full.

Question #1: ". . . are forests best preserved by prohibiting cutting?"

Answer: That depends on the purpose for which the forest is maintained. If the purpose be to provide crops of lumber, which may be harvested at more or less regular intervals, the answer probably is that cutting may be beneficial. If the purpose be to preserve certain areas of the State as "wild forest lands," to preserve (among other things) the source of our water supplies, it is our belief that the forests

are best preserved and such purpose is best accomplished by prohibiting cutting.

Question #2: The meaning of "forever wild. Does it suggest an abundance of birds and animals . . . does our present management policy promote that objective?"

Answer: Of course these words suggest birds and animals but not certainly an "abundance" of bird and animal life. The primary purpose was and still is to protect the forest cover. Bird and animal life is an incident desirable, but not the main objective of the "forever wild" mandate.

Question #3: ". . . does the present management policy . . . contribute to the economic needs of State and Nation?"

Answer: (a) The State of New York is generally recognized as the wealthiest state of the nation. Should an emergency arise where the wood from its forests is needed for national defense, we might have a different problem. Right now, lumber for building or for pulp is obtainable elsewhere. Other states have forest lands which have been set aside to remain "forever wild" and the Federal Government creates parks and National Monuments for a like purpose. We never have heard it suggested that this was selfish or unpatriotic.

(b) One of the great economic needs of the State of New York, like that of other states, is water. We believe that protection of the forests at the principal sources of our water supplies is an end in itself and a very great contribution to the economic needs of the State.

(c) The question carries the implication that the dollars we can get out of the forest preserve on a sustained yield basis, should supply the criteria for its management. With this we disagree completely.

Question #4: ". . . are we making the most of the potential recreational values of the Forest Preserve?"

Answer: That depends upon what is meant by recreational values. The State of New York has its large recreational centers, like Jones Beach; and for those who prefer the mountains and inland water for "recreation" in the popular sense of the word, there are many places, some of them within the Adirondack and Catskill parks. For many of our citizens, however, the word "recreation" means a trip on foot or by canoe through the wild country of the State, with camera, rod or gun. It is worthy of note that various constitutional amendments intended to open the Forest Preserve to "recreation" of a more popular kind have been defeated. We do not think that Article XIV of our Constitution was framed with the idea of "recreation" as a primary objective, certainly not recreation of the urban type. We do think that the Forest Preserve, as it now stands, is providing the most and the best of recreational values to a very large number of our citizens.

For fifty-seven years power interests, lumber interests and others have tried to break through the constitutional protection which the People have thrown around the Forest Preserve of this State. Even now, such an attempt is being made, the power interests—acting under the mask of "stream regulation"—even going to the point of challenging the constitutionality of one of our State laws. Those interested in conservation have done their best to defend the constitutional protection which the People repeatedly have voted to save our Forest Preserve for future generations. It is disheartening to find our own Conservation Department, whatever its motives may be, aligning itself in practical effect with those who would decrease the constitutional protection of the State forests and exploit them for commercial purposes.

Very truly yours,
JOHN E. HAMMETT

We asked for, we respect, and we now publish without comment, views contrary to ours concerning management of the Forest Preserve. But both Dr. Hammett and Mr. Kelsey advance an argument that we cannot let pass, since it goes beyond the subject of the discussion and suggests that the discussion itself is improper. They argue that the management of the Forest Preserve was considered and decided upon at the Constitutional Convention in 1938, and that any further discussion at the present time is unwarranted. We have no alternative but to conclude that these gentlemen believe that management of the Forest Preserve should be discussed only once in every 20 years, and then only in Constitutional Conventions.

We profoundly disagree. We do not believe that any property such as the Forest Preserve—dynamic, growing, constantly changing—can be managed in the best public interest unless management policies are examined and re-examined at much more frequent intervals.

Mr. Kelsey goes a step farther. He suggests that the Conservation Department is merely an administrative agency, and that it is not proper for employees of the Department to speak their minds concerning the problems they are required to handle.

If this were to become an approved philosophy for public servants, we hate to think what would become of democratic government in America.—Editor

By Frederick T. Kelsey

President, The Association for the Protection of the Adirondacks

Dear Mr. Fosburgh:

WE have read with concern your editorial in the October-November issue of THE CONSERVATIONIST and the subsequent articles in the recent issue.

It seems to us that as the official publication of the Department of Conservation the articles in THE CONSERVATIONIST start out with a wrong premise. You say, "As the appointed guardian of this property the Conservation Department would be at fault if it didn't inquire as to whether or not this management policy, written many years ago, is still operating in the best interest of the people of the State of New York."

The Department of Conservation is an administrative agency. Its duty would plainly seem to be to care for the property submitted to its charge under the law and within the law. So long as it performs this duty it cannot be charged with fault.

Also, in speaking of a management policy, "written many years ago," you apparently ignore the fact that in 1938 a Constitutional Convention unanimously affirmed this policy.

Question 1. It is a matter of common knowledge that our Adirondack forest lands, after centuries of growth, decay and regeneration, were, at the time white settlers took over one of the finest forests in this wide land, in spite of storm, lightning and decay. The hand of Nature had preserved and continued a magnificent forest as wild forest lands. In the Constitutional Convention of 1938 every argument was advanced that could be made in favor of "scientific forestry" in the Adirondack Preserve, and all efforts to change Article XIV to permit this were overwhelmingly rejected.

Question 2. If we examine the past history of these forests the definition of "Forever Wild" as it should now be applied to our Adirondack forests, is not difficult to determine. The abundance or non-abundance of bird and animal life is an incident of a wild forest dependent upon many factors extraneous to the growth of trees. Our constitutional provision did not direct forests to be administered as a game management area but limited it to the terse and direct statement "they shall forever be kept as wild forest lands." The lands as Nature made them and as man found them.

Question 3. The Conservation Department, over a period of years, has done much to make the Forest Preserve enjoyable to those who love its wilderness values. The system of trails

and the many open lean-tos are used by increasingly large numbers of people who love the wilderness values. In addition, the Department has provided fine camping facilities in those parts of the Preserve adjacent to public roads, such as the camp at Meacham Lake and the Fish Creek camp. These developments along the roadside open the Preserve to those who are not physically or otherwise able to take hikes in the wilderness. It is not true that great recreational value does not exist today in the Preserve. Further development along the lines implied or suggested by the articles in THE CONSERVATIONIST would certainly tend to impair the wild forest character of much of the Preserve and thereby would, in our opinion, actually destroy its greatest recreational value in the simple pleasures and problems of camp life in a wilderness area, and in the opportunity for observing and feeling the values which come from close association with forests, streams, lakes and mountains unspoiled and as nature made and left them.

Question 4. For upwards of sixty years the people of the State have protected the Preserve as wild forest lands free from all attacks of commercialism, either direct or under the guise of sport and recreation.

When the constitutional provision was originally adopted, one of its purposes was to protect the Forest Preserve from economic exploitation—at that time the devastating spoliation occasioned by lumbering. The need today for protection of the Preserve against commercial spoliation for economic purposes—such as development of power projects under the guise of flood control and similar economic uses—is as great as was the vital need of such protection from lumbering many years ago.

Dr. George Macaulay Trevelyan, late Master of Trinity College at Cambridge, whose publication "English Social History" is said to be the greatest phenomenon in its field since his great-uncle Thomas B. Macaulay wrote his "History of England," is reported to be a tireless hiker and a zealous lover of the green loveliness of his land, who warned his country that unless its beauties are preserved against the defacements of modern life, "the future of our race will be brutish and shorn of spiritual value."

Should we not learn our lesson from the wise men who wrote the "Forever Wild" provisions in our Constitution in 1894—reaffirmed in the Constitutional Convention of 1938—and take counsel and advice of such men as Professor Trevelyan?

Truly yours,

FREDERICK T. KELSEY

By William Pearson Tolley

Chancellor, Syracuse University

"New occasions teach new duties, time makes ancient good uncouth."[1]

IT was a proud day for friends of conservation when the Empire State incorporated in its Constitution an article designed to protect in perpetuity the great forests of the Adirondacks and Catskills on State land. It was an appropriate measure for its time and it has served a useful purpose. With the passage of the years, however, it is more and more evident that the constitutional provision is a legal strait jacket which denies to the State the right to make intelligent use of its forests.

The primary importance of these properties lies in their aesthetic, rather than their material and economic values. It appears that there is general agreement on this. Nevertheless, it should be realized that the trees which contribute so much to the aesthetic values of the Forest Preserve are a crop, and like any other crop, require care and management. And there comes a time when the crop should be harvested. Moreover, forests belonging to the people should be available to the people for recreation.

It is no secret that the constitutional clause which requires the Forest Preserve to be retained in a "forever wild" condition has contributed to great waste of timber resources, and likewise has made it impossible to take full advantage of the opportunities these lands offer for recreation and wildlife development. The people of New York should begin to consider whether the current policy of restricted use and consequent waste should be retained in the administration of the Forest Preserve lands, or whether it should be amended in favor of a policy which would permit the development and utilization of the resources of these areas in a manner more in harmony with sound economics and public need.

The blow down in 1950 illustrates the need to bring the Constitution up-to-date. Everything that has been done in the salvage of timber is probably a violation of the Constitution. The common sense steps that have been taken may in fact be a contravention of the law. The State Department of Conservation could be trusted to administer the State forest properties and to keep them improving both in dollar value and in wildlife and recreational value. The experience the State College of Forestry has had with the Pack Forest, the Huntington Forest, the forests at Cranberry Lake and in Onondaga County points up the contrast between good forest management and the deteriorating State Forest Preserve.

Re-examination of the policy governing the management of the Forest Preserve, as established by Article XIV of the State Constitution, is long overdue. The framers of this article could not have foreseen the tremendous growth of population to come in the last fifty years or the rapid development of transportation and highway facilities to bring the Forest Preserve within relatively easy reach of the people.

Rather than permit the people of the State to enjoy full use of their own lands, Forest Preserve policy actually limits use to whatever can be contrived by the resourceful to meet the "forever wild" condition. The recreation facilities that have been developed over the years have been largely incident to fire protection, or permitted only through broad interpretation by the courts. Preservation of the forest on Preserve land is denied rather than achieved by adherence to the mandate of Article XIV. The provision of the Constitution, "nor shall the timber thereon be sold, removed or destroyed" is safeguard only against the cutting of timber. Destruction of timber by the acts of nature cannot be prevented by legislation. The storm of November 25, 1950, found its easiest victims in old spruce stands and among overmature hardwoods, and in consequence wrought its greatest havoc where stands of such old trees were most to be found—on State land. Judicious cutting in the forest, when trees have moved past

[1] "The Present Crisis," James Russell Lowell, 18th stanza

The Adirondacks never had a better historian, nor the Forest Preserve a more devoted champion than Alfred Donaldson. With all due respect for Mr. Trevelyan (left), we offer the following from the final paragraphs of Mr. Donaldson's history written 30 years ago.

"The experience of the years fully justified this 'Gibraltar of Forestry' (now Article 14, Section 1—Ed.), as Mr. Schofield aptly termed it. Its best friends were quite aware, however, that it embodied the wisdom of necessity, not of choice. The need of the moment called for forest-salvation pure and simple; it allowed no play to the desire for scientific development . . ."

"The plea is made that the bad days in the Adirondacks are over, and that the time has come to open them to scientific cutting and replanting—which is true conservation. The justice and wisdom of the theory no one will deny, and popular sentiment is undoubtedly inclining more and more to give it a trial. It seems highly probable, therefore, that the forest struggle of the future will center around the safeguards of such a trial, rather than in unyielding opposition to it."

the peak of development, can serve to moderate the effects of the forces of Nature and lessen the chances of destruction.

When the Constitution is amended to permit the Forest Preserve to serve more fully the needs of the people of the State, two things must be made certain: the assurance that trusteeship will remain in capable and understanding hands, and the segregation of various areas each for the combination of the most desirable benefits it can produce. The Conservation Department is already the appointed guardian of the Forest Preserve, but it should also be designated by law as the permanent manager.

It is clear that the lands of the Forest Preserve should be carefully classified into potential uses. Some should be developed primarily for recreation and watershed protection and kept "forever wild." These are remote and rugged areas. Some should be developed for intensive recreation. There should be camp grounds, well kept trails, bathing beaches, and similar facilities. Some that have neither the feature of remoteness or ruggedness, or any recreational attraction might appropriately be developed for timber production. Many areas will be more useful for recreation, particularly hunters, if timber cutting is permitted. This improves conditions for wildlife, makes land more accessive for the hunter even though no permanent roads are developed. Special care, of course, needs to be taken to preserve natural roadsides, scenic vistas, and other features for the traveling tourist. Of importance should be the preservation of the spirit of the wilderness for those rugged souls who have the time, physical energy, and the will to enjoy nature as God made it. Properly administered, the Adirondacks and Catskills can meet all of these demands.

An amendment to the Constitution to modernize Forest Preserve policy should leave no loopholes through which income from forest management on Preserve lands could be drained away for any use other than development and expansion of the Preserve. Also, an equitable distribution of such income among the various facilities and services needed should be assured. The Forest Preserve is giving us a "windfall' of some two million dollars as a result of timber salvage operations. Constitutionally, we can make little use of this money for improving the Forest Preserve for greater use by more of us, although the money came out of the Preserve and should be reinvested in its improvement. This paradox should not be allowed to occur again.

By Gerald Kenwell

Adirondack woodsman and guide for 50 years

I WISH every youngster could have the wonderful experiences I was lucky enough to have as a boy growing up in the Adirondack wilderness. Over 60 years ago when I was only four years old my father took our family by team and wagon from Indian Lake to the now famous Moose River Plains, cutting his own rough wagon road down the South Branch of the Moose. The spot where our log home (gone now) stood on the Plains is still marked Kenwells on the map, because the first surveyors stayed with us.

My folks catered to hunters, fishermen and outsdoormen from all over, and many of them were famous people. I had a chance to roam around this big country and to know old French Louie of West Canada Lake, old man Baker and many others. What boy could ask for more?

As time went on I built my own camp on Otter Brook and spent part of each year there. Now I'm back there, I hope for good. By now I suppose many of the younger generation regard me as an old timer.

It has been my privilege to show hundreds of men, women and youngsters how to hunt, fish and enjoy the woods. I know how much these experiences meant to them, and I have always thought it was too bad that more people could not enjoy the woods through more lenient laws. So I am glad to see this discussion about it and add my ideas to those of others.

Back in 1890, Gov. David B. Hill forwarded to the Legislature a special report urging the establishment of an Adirondack Park and the purchase of lands necessary to such purpose. He also made recommendations more lenient to public use than were adopted. One of which I thoroughly agree with. That one was to make the wilderness of the Park more accessible to more people for recreational purposes.

To date very little of that recommendation has been followed for there are vast areas that only the hardiest woodsmen could contact. The majority of people that helped buy and pay taxes on all this wild land have never had the pleasure of enjoying it, for reason it was inaccessible to them.

Therefore, I would personally recommend slightly revamping one section of our Conservation Constitution, on Article XIV (by referendum).

When I stand on one of these mountain tops looking out over this scene of panorama grandeur. I have a feeling of selfishness. Why should only I and very few others have such a thrill and so many others be deprived of it? They were just as much a part of buying this beauty as myself. Why not make a few alterations in our Constitution and make it possible for others to enjoy this privilege?

In recommending this, I will suggest that we gear the law to privilege our Forestry Department, under strict and efficient management, to clear out many foot trails to the interior of our wild lands. Also provide for Ranger, Protector and traveler huts at intervals, back in remote sections. Say huts not to exceed 16′ x 18′ in size and equipped with overnight gear such as a few cooking utensils, small stove and a few camp blankets. Such camps would be a big advantage to our Foresters and Game Protectors as an outpost to run down forest and game violators, as well as an overnight haven to a tired and weary sight-seer and vacationer.

By having these overnight cabins (and I would advise not closer than five miles apart) equipped with the necessary camp gear, it would relieve the unaccustomed traveler of packing on his back anything but his food supplies, therefore enabling the less muscular fellow to enjoy some of this outdoor life and the beauties of our wild land in remote sections.

Another advantage to this program would be to open up fire trails so if a lightning fire started in one of these inaccessible locations we could approach it from some direction to squelch the fire. Again I would like to recommend that these proposed trails be of a uniform design, says six feet wide. With that stipulation it would prevent these proposed trails from becoming a public vehicle right-of-way, yet be roomy enough to be a practical foot trail.

Some people say that this sort of thing can be done under the present Constitution. I am not a lawyer but I can read, and when I read the Constitution, where it says we cannot cut trees, I don't see how the things I recommend can be done.

Now it is my intent to recommend that we should all take up the spirit and further our forefathers' wisdom in behalf of the general public welfare. I solicit my many friends and fellowmen of this Empire State to scrutinize these proposals and lend a hand to our Conservation Department by writing in your recommendations and helping them draft a concrete plan to be presented to the general public for referendum, to further our public benefits.

Animals —and your health

White-Footed Mouse

Spectral Galago

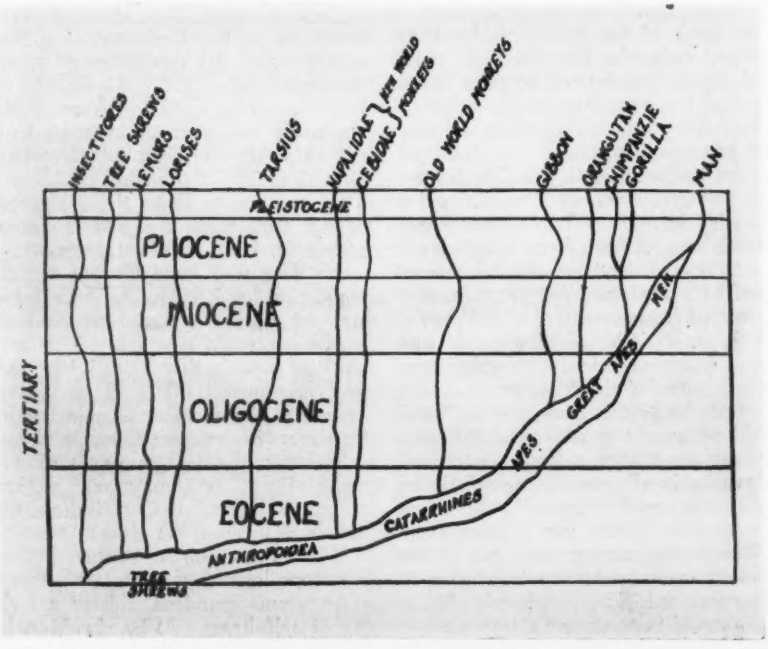
TO use something "as a guinea pig" is a phrase with which all of us are familiar. It suggests the use of an animal less than Man in an experiment the results of which will have a much broader significance than anything that happens to the guinea pig itself.

In spite of our general acceptance of this phrase, few of us realize the role which animals play in our daily lives. Most of us think of wildlife as an incentive to get us out of doors for recreation and sport; of domesticated animals, as a source of food. Yet in New York State, whenever two people want to get married four animals used in the Wassermann syphilis test must pass on their physical fitness. Blood complements from sheep, rabbit, guinea pig, cow and Man are needed in this test. But that is only the most familiar use of animals in medical science. Most hospitals, medical research centers, medical schools and universities, as well as State and Federal health departments use animals in conducting their daily business, and with them make thousands of experiments on human diseases in the course of a normal day.

Animals provide us with life preserving serums, toxins, vaccines, blood complements, antibiotics and the like. Animals test, by eating, most of the pills and drugs that are dumped on the market as cure-alls for aches and pains.

One of Man's greatest hopes for keeping healthy today and tomorrow lies in the development of new animals that inherit diseases in the same way that some lines of mice hand down cancer in as high as 98 per cent of their young. If animals can be found that have the crippled joints associated with arthritis, or the damaged hearts of cardiac victims, these animals will be extremely important in testing and exploring such diseases. In view of results achieved to date, it is not unreasonable to expect that in the future animals will be instrumental in solving some of the basic mysteries of medical science. It might be cancer. It might be polio or the common cold.

In any case, great advances in medical science have already been recorded as



Graph shows animal races which branched off main evolutionary stem that produced *Homo sapiens*

a result of experimentation with animals. But there still exists a basic need for new animals in medical research. We still have many diseases for which no suitable laboratory animal is known. Cases in point are polio and polio-like diseases.

Right here in New York, medical research men are out to find new animals. At the Conservation Department's Delmar Game Research Laboratory the growth of the white-tailed deer antler is being studied by Harvard's Medical School to determine hormone effects and cancer development. Anything which teaches us more about *normal* growth is essential to our understanding of *abnormal* growths such as cancers, cysts and tumors.

Up at Bar Harbor, Maine, the Roscoe B. Jackson Memorial Laboratory is developing a ferocious kind of rabbit which will snap at anything that is poked into its cage. Normally rabbits, even wild ones, can be picked up without any attempt on their part to bite. From experiments with these rabbits, scientists believe it may be possible to learn more about the fundamental reasons why animals (including Man) fight (and perhaps even go to war). In further hope of exploring the human mind, some mice at the Bar Harbor Laboratory are being tested for their reaction to insulin and electric shock as possible steps toward treating mental illnesses in humans. And most of our new drugs as well as our agricultural sprays must be tested with animals to find out if there are health hazards for humans in their use. Some, when tested, have produced cancer.

ANIMALS may also be instrumental in solving these questions: Is Man's attempt to make life easier and less rugged the best thing for him? What effect does this soft life have on his organs? His ambitions? Has it resulted in decreased production of vital hormones by some organs, and so caused new disorders? If our adrenal glands were functioning properly, would we need ACTH and cortisone? Until the right animal is found for experimental purposes, humans will continue to play the guinea pig in this branch of research, and like any other experimental animals, they will pay the price.

New York has more than its share of medical animals breeders. The State Health Laboratory Farm at Guilderland raises, among other things, disease-free mice, and was responsible for isolating the Coxsackie A and B virus which are polio-like diseases. New York City's Health Department has an animal farm at Otisville. In the commercial field, major breeders are the Carworth and the Rockland Farms at New City, Tumblebrook Farm at Brant Lake and Willett Randall's Farm at North Creek.

Perhaps the most unique of these is Tumblebrook, which has long recognized the need for new medical animals and has done much research to produce them. Several years ago, Tumblebrook started a systematic search for new animals, concentrating on those which originate along the mammalian stem (see chart). The theory here is that those animals arising nearest to Man or bearing closest genetic resemblance to him would perhaps be the most susceptible to his diseases.

On the market in limited quantities as a result of this search are the cotton rat, snowball rat, meadow mouse, white-footed mouse, wood rat, red-backed mouse, jumping mouse, short-tailed shrew and the Chinese hamster. The Spectral Galago and the Grand Galago, both South American species, are now being tested.

On the list for research, but still relatively unexplored, are the rice-field mouse, pine mouse, lemming mouse, long-tailed shrew, kangaroo rat, grasshopper mouse, little harvest mouse, Philippine tree shrew, banana rat and the bandicoot.

There are many problems involved in an animal breeding program of this nature. First is the problem of selection. To be suitable for medical research, animals must be relatively small, inexpensive, handle easily, be prolific —and they must reproduce throughout the year to maintain a continuous supply. These desired characteristics must then be checked against the *known* characteristics of readily obtainable animals in the wild to find out which qualify for experimentation. Next, nutritional and breeding requirements of these animals must be solved. Some animals need special foods, some are chronic fighters and kill each other, while still others fail to reproduce or even to live in captivity. Each species presents its own problems.

Perhaps the greatest challenge to the animal breeder lies in those animals which refuse to breed in captivity. It seems certain that these animals could be induced to breed if favorable environmental conditions could be produced in the laboratory. For example, on December 18, 1948, a shipment of 10 male and 10 female Chinese hamsters arrived at Tumblebrook. Nothing was known of their nutritional or breeding habits. To bring them alive into this country was an achievement in itself, but to keep them alive was a still more difficult problem, for the females killed the males in breeding time. It took five years to solve these problems, and of the original 10 pairs only three females and one male survived. To keep the female from killing the male while in the cage for breeding purposes, small pipes were put in the cage. These pipes were large enough to admit the male, but too small for the female. So when pursued by the larger female, the male hid in the pipes. When the male became acceptable, the female was bred and her mate was then removed from the cage. Today, most of the Chinese hamsters in this country are descendants of these four original imports, one female of which is still breeding. Incidentally, all of the golden hamsters in use today (some billions) are direct descendants of a colony of one adult female and 12 young which were dug up in Aleppo, Syria in 1930 by I. Aharoni of the Department of Zoology, Hebrew University, Jerusalem.

The Chinese hamster has already been found susceptible to kala-azar, diphtheria, tuberculosis, pneumonia, influenza and rabies, and may prove to be important in the polio and cancer fields. Breeders believe it will be of greater medical value than the golden hamster.

When Tumblebrook took up the project of making the jumping mouse (*Zapus hudsonius*) a medical research animal, they faced another problem. Jumping mice are true hibernators (like the chipmunk and the woodchuck) and sleep nearly 6 months of the year. Of course, a sleeping animal is of no use in medical research, and so this characteristic had to be eliminated. In the winter of 1949-50 this problem was solved, but there remained the problem of getting the mice to breed. This too was solved; the next winter

Male Chinese Hamster
Actual Size

Meadow Mouse

there was no hibernation, and one litter was produced. But now that the jumping mouse colony is a regular, nonhiberating breeder, some gland specialists have asked that at least a few jumpers be allowed to retain their hibernation characteristics so that the effects of various hormones on the speeding of body processes can be studied.

Of course many interesting and unexpected things happen, and many mysteries remain unsolved. The National Research Council of Canada supplied Tumblebrook with a stock of lemming (*Dicrostonyx*) from Churchill in the Hudson Bay region. This species had never bred in captivity. Tumblebrook succeeded in breeding them and the colony produced consistently until one day every animal was found dead. Autopsies, microscopic slides and cultures yielded negative results. There was just one clue to the mystery; periodically something happens to cause the lemming population to decrease tremendously every four years, when death for one reason or another overtakes most of the population and reduces it to the disappearing point. The death of the Tumblebrook colony coincided with this natural phenomenon. Could the same mysterious factors that decimate wild lemmings have caused the death of this caged colony? So far, nobody knows.

Once in a while a new species turns up as a result of breeding. It's happened at Tumblebrook. They started breeding cotton rats from seven wild rats which were caught near Montgomery, Alabama, in 1941. The cotton rat is one of the few small inexpensive animals (besides white mice and possibly the Chinese hamster) which are susceptible to the Lansing strain of polio. In February, 1947 a mutant appeared. It was completely white, but with brown eyes. It was then mated with a relative. From this experiment a whole colony of white cotton rats developed. They were dubbed "Snowball Rats," and it is hoped that their susceptibilities to various infections have been altered and perhaps intensified beyond those of the normal cotton rat. If this is so, it may prove to be another stepping stone in solving the mystery of polio.

The human race owes a great debt to the animals used in medicine. With their help, Man's life expectancy has nearly doubled in the last 100 years. The monkey, rabbit, agouti, capybara, golden and Chinese hamsters, white-tailed deer, hedgehog, rats, brown trout, rainbow trout, 3-spined stickleback, bitterling, frog, meadow mouse, cotton rat, white-footed mouse, the opossums, guinea pig, ferret, canary, parrot, cow, sheep, dog, cat, horse and others have been used in medical research on such diseases as tuberculosis, cancer, polio, heart diesase, diphtheria, yellow fever, arthritis, influenza A and B, rabies and hundreds of others. Animals have also been used in all sorts of nutritional, physiologic, psychologic and genetic studies, as well as in testing drugs and insecticides. Everything considered, our debt to lesser animals is very great.

And then there are the men and women who devote their lives to medical research. They are perhaps our greatest conservationists, for in this business of conservation the health and welfare of the human is the end product of our thinking.

—Nick Drahos

Cotton Rat

Snowball Rat

Pocket Mouse

MYSTERY ON LONG ISLAND

WITH fishermen thick as flies along our Long Island shores, nothing out of the ordinary occurs that does not come to their attention. And, as a matter of course, the information is passed on to the Conservation Department's Bureau of Marine Fisheries. Consider for example, what happened on September 17, 1951; the calm routine of the Freeport office was broken by a continuous chain of telephone calls from excited fishermen telling of dead and dying fish of all species drifting ashore on the ocean side of Jones Beach, and also in Hempstead Bay.

Upon investigation it was found that at Jones Beach large numbers of blackfish, bluefish, dogfish, blowfish, and anchovies were being thrown up on the sand, where they were eagerly seized by ravenous hordes of waiting sea gulls. At Point Lookout in Hempstead Bay, at noon on September 17, dying fish (both top and bottom species) appeared on the surface of the water. Schools of dogfish, skates, young bluefish, and spearing, normally predator and prey, swam together near the shore but paid no attention to each other. Big fluke, some weighing as much as 10 to 15 pounds, and large eels moved lethargically near the surface. Additional species noted in distress were winter flounders, daylight flounders, seabass, kingfish, blowfish, and filefish. Shrimp kept for bait in a live-car were killed, and even crabs were dying. As the tide fell, some of the fish were left stranded on the shore, but by 6 o'clock that evening the condition seemed to be improving. A bait dealer seined spearing at that time and they acted normally.

The same conditions prevailed that day at Wantagh Bridge. Before noon the fish were biting. At noon they stopped biting, and fish were seen on the surface and working toward shore. Some of these were left behind as the tide fell. Two fishermen, interviewed independently, reported brown patches in the water.

At all places the water gave off a sweet, fishy odor. At Jones Beach it was reported by State Park personnel that this odor had been present during the previous week. From combined fishermen's reports and from our own survey, it was concluded that the mass kill of fish was limited to the waters along the ocean side of Jones Beach.

Noctiluca; the guilty party?

and to Hempstead Bay from Point Lookout to Wantagh Bridge.

What was responsible for the kill? The blasting connected with the construction of a new causeway to Captree State Park was given as a cause of the kill by some, but the remoteness of the project from the "Fish Kill Area" precluded this possibility. Furthermore, examination of recently dead fish showed the air bladders to be intact—not collapsed, as would be expected if they had been victims of an explosion.

Pollution was next considered as a possible reason for the kill. Since no oil slicks were visible and no oil was found in the water samples taken both in the Hempstead Bay and ocean areas, oil pollution was not to blame for the kill. Sewage could not have killed the fish since they first were found dead and dying in the clean ocean water off Jones Beach. Ferrous sulphate coming from the wastes dumped at sea by the National Lead Company could not have been the cause, as a test by our chemist showed less than 0.1 parts per million of iron in the sea water taken on September 17th at Jones Beach by personnel of the State Park Department.

Evidently Nature, and not Man, was responsible for the sudden kill of fish, and indications are that they first began to sicken and die well out at sea. The normal population of fishes in the section of Hempstead Bay experiencing the kill ordinarily consists of moderately sized fish, yet very large fish of all species were found dead and dying here. It is likely that these fish had already become sick at sea and flowed in with the tide on September 17, to be left stranded on the shores as the tide fell. Also, as the tide came in through Jones Inlet, it brought in "something" which killed the fish resident in the Bay, as indicated by the kill of the shrimp held in the bait car, as well as by the kill of crabs and resident species of fish such as the spearing, killies, and young flounders.

Just what this "something" was will never be definitely known. Most probably it was some microscopic organism similar to the one responsible for the "Red Tide" kill of fish off Florida several years ago. These organisms give off toxic substances, but under normal conditions they are present only in limited numbers and have little effect on the fish life about them. But given optimum environmental conditions, they may reproduce very rapidly and the accumulated toxins may kill the fish in the vicinity.

In water samples examined, the only abundant organism was *Noctiluca*, which is a protozoan belonging to the *dinoflagellates*. The *dinoflagellates* are the animals responsible for the Florida "Red Tide" and fish kills in other areas, as well as for clam and mussel poisoning in Canada and on our Pacific Coast. *Noctiluca* were very abundant in water samples taken on September 18, but by September 20 had all but disappeared. During the same period fewer dead fish were observed, and by September 22 no recently killed fish were reported.

The short period in which the fish were killed and the rapid return to normal made it impossible to determine with absolute certainty whether *Noctiluca* was responsible for the death of the fish, but circumstantial evidence suggests this organism was responsible for the kill. However, until it becomes possible to culture *Noctiluca* in large enough quantities to try actual experiments with its effect on fish, it cannot be definitely labeled as the culprit.

MEANWHILE, an army of fishermen keeps watch along Long Island shores ready to report any future fish kill. While we hope that it may never happen again, we must admit that a recurrence of this disaster would be of great assistance in determining the causative agent.

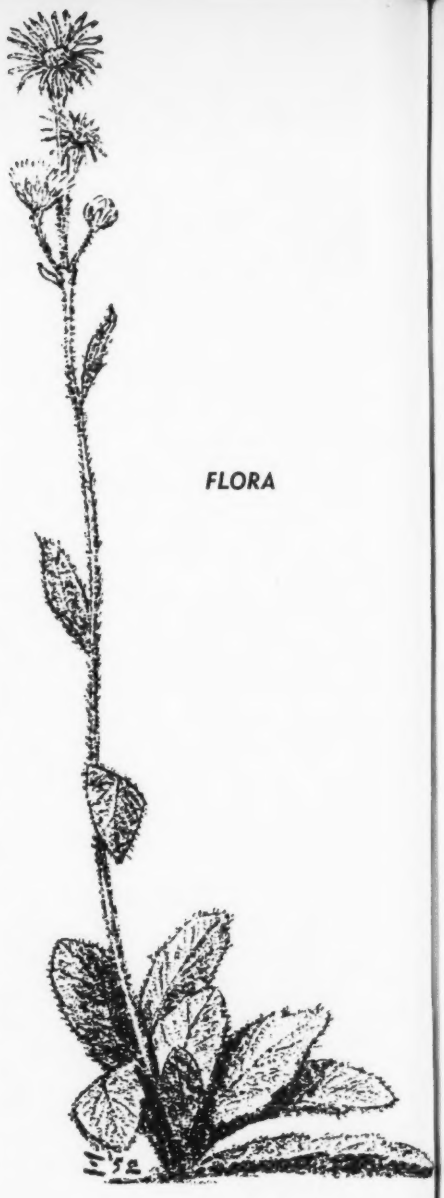
—ALFRED PERLMUTTER,
Senior Aquatic Biologist (Marine)

WEEDS

FOR HANGMAN'S ROPE WART CURES AND SUNDAY DINNER

by Adele Erisman

FLORA



Mouse-ear or Poor Robin's Plantain

EVERY day, rain or shine, my terrier and I take a tramp over fifteen weedy acres that were once hillside pasture and cornfields. Since I can't enjoy the smells that keep terriers happy, I've had to amuse myself on these daily trips by looking at the plants underfoot in as many different ways—from as many different points of view—as have the various people who have walked there with me from time to time.

I know the classic definition: *A weed is a plant growing in the wrong place.* But I've come to wonder why nettles or docks are never anything but weeds. Or plantain. Do they never grow in the right place then? Why can certain weeds take over in places where nothing else will grow, where the soil is poor and neglected and eroded? And how do they manage to get minerals and moisture from deeper reservoirs than the plants we cultivate?

I don't know the answers, but Coccanauer's recent book, "*Weeds: Guardians of the Soil,*" expounds a new theory about weeds that appeals to me. He says a few large healthy weeds growing among garden and truck crops will actually aid the growth of more delicately rooted plants by drawing up deep buried minerals and making them available near the surface, by breaking up hard subsoil and thus making room for less aggressive roots, and by providing shade that preserves moisture in the soil and breaks drying winds. He suggests leaving a few large weeds among our crops to see what happens. That's probably the first piece of gardening advice I've ever come across that didn't tire me just to think of it.

I mentioned the people that sometimes look at my weeds with me. One of them is a soil technician. He looks for evidence of fertility in such robust plants as dandelion or buttercup, but instead he finds the cinquefoils, sheep sorrel, St. Johnswort and hawkweed that tell him the land is poor and eroded. He finds acid conditions where mosses abound and we get covered with beggar ticks while he points out that they are evidence of poorly drained soil.

We could bring the field back to productivity, the soil man says. He would have me start with a thorough cultivation and then perhaps a chemical spray to kill volunteer weeds before fertilizing, liming and planting a good pasture mixture. We might turn in green manures first, and we'd get hay of fine quality, but never again put corn on that slope, nor cattle either—just grass.

Maybe I'll do as he says some day, but meanwhile I have friends who like the field just as it is. Among these is an expert in Colonial history. She no sooner sees a weed, particularly one of the thousand or so European and Asiatic kinds that have been brought over here (and are the most pesky), than she has some story about its introduction and use by the early settlers. The common plantain, ugliest duckling of them all, hated by everybody but house sparrows, was used as a cure for snakebite and hence called snakeweed. The Indians called it "white-man's footsteps" because it followed wherever he settled. And the controversial hemp with the 5 to 11 leaflets (for which I search excitedly hoping for an excuse to notify the authorities and thus become an object of local fame) she says was called neckweed, a typically direct reference to its early use by the hangman. We call hemp "marijuana" today, its reputation no less grim than when it was called neckweed.

Many of the plants we now detest were brought over for their medicinal properties, cultivated for that purpose and then grew out of hand. The little yellow-flowered celandine was supposed to cure warts. The ox-eye daisies that came from Europe were valued as tonic and cure for whooping cough, asthma and nervous excitability among other things. The cinquefoil was a plant of Jupiter and therefore strengthening to the body, a tonic and astringent useful in fevers, bowel complaints, night sweats, hemorrhages and an excellent gargle for spongy, bleeding gums and ulcerated mouth and throat. (This from an old herbal.) And yarrow was used as a cure for the wounds of soldiers, a remedy for toothache and a decoction of the leaves to prevent falling out of hair. It was called nose bleed because the leaves when stuffed in the nose (why, for heaven's sake?) caused it to bleed. In Sweden it is used to make beer.

Weeds are still in use today. The chemist, when he walks in the field, speculates on everything that grows. Milkweed was collected during the war,

the floss used as a substitute for kapok to make life preservers. He tells me that many of the old medicinal plants are still recognized and even appear in the pharmacopoeia. Price controls were recently lifted on "fleabane, mouse-ear and wormseed," three irresistible names that gave the radio commentators a field day. Wormseed is valued in medicine as an anthelmintic, a hard word for worm pills. Mouse-ear also called Poor Robin's Plantain, was found as recently as 1922 to possess diuretic properties used in various types of edema. Fleabane is an insect repellent. Even the baleful jimson weed produces a drug of great value just like belladonna and is used for asthma. And a species of wild rose hips which the British gathered during the war made an extract surpassing any other known source of Vitamin C.

Our Game Warden and his friend, the sportsman, take a professional interest in my field too. They like the weedy woodland edges much used by rabbits and other small game. They admire the foxtail grass, another foreigner, that may feed a covey of bobwhite all winter and will certainly provide me with one of the nicest sights and sounds to be found on zero days—a flock of tree sparrows jingling like sleigh-bells as they feed on its seeds.

An artist friend rhapsodizes as he walks in the field on a frosty morning. Every plant has somehow been enclosed in a glassy sheath with ice diamonds along the edges, till the weeds look like something out of Tiffany's window. And one snowy day every year we welcome a photographer from the city who lugs his paraphernalia into the field to get pictures of weed patterns in the snow along with little bird and mouse tracks.

Spring brings the herb fancier and epicure. He looks for tender shoots of milkweed and dock. He will eat anything, including field mushrooms. I share his enthusiasms rather tepidly. Milkweed is good, and poke, if young enough, tastes like strong asparagus, provided the first cooking water is poured off. He urges me to try nettle and chickweed, both mineral-rich poultry and bird feed, but I say it's spinach and I say it's for the birds. His latest discovery is young greenbrier shoots which are supposed to be cooked and to taste like string beans, but woe betide if they are not cooked at once! If allowed to stand overnight they become poisonous. It seems to me that most weeds are poisonous to some degree and seem to have gained their reputations as medicine from their bitter taste and the fact that anyone surviving the concoctions made from them was so healthy nothing could kill him.

An amateur entomologist entertains me with stories about garden spiders, that he has taught me to call arachnids, and whose lives I find vastly entertaining if slightly macabre. Ever since the time he showed me a goldbug on bindweed I've looked on that over-energetic plant with some degree of favor, but I've found only one other goldbug on it so far.

The botanist, whose company I welcome perhaps more than any of the others, will search in the haircap moss and near it until he finds, growing in the acid soil in full sun, the bronze leaf of the grape fern, with its fruiting frond standing above it, fresh and beautiful in the middle of winter. I am on the lookout for grape fern now wherever I see haircap moss, and I usually find it.

Come fall I am greeted by a group of garden club enthusiasts who want to collect mullein stalks and dock and evening primrose and hardhack for dry winter bouquets. They promise to put the evening primrose outdoors again in March for goldfinches to feast on.

A real estate dealer is another of my visitors. She looks speculatively at a strip of level ground near the road and figures that a bulldozer brought in for a few days would give me some profitable building lots. She doesn't realize what she's said. That word "bulldozer" is a fighting word to me. By pushing around great chunks of land formerly reposing under good cover, this monster machine has become the best friend the noxious weeds have today. It removes the topsoil and cover. This starts erosion and gullies that eventually silt up our streams and reservoirs. Nothing survives but a few weeds, Nature's slow means of building the soil up again from scratch. A weed control far cheaper and better than chemical sprays or mechanical cutters would be a curb on that ebullient machine.

From the above it is plain to see that I have become a tenth-rate ecologist too from watching my weedy field. I can't help noting the relationships of plant and animal life, seeing the inevitable slow march back to forest—weeds and grasses, first annual then perennial, preparing the way for shrubs and later weed trees, so-called, then sun loving forest trees and finally the mature climax forest, oak-hickory or maple-beech-hemlock, both of which occur here where the two zones meet.

In the present stage I enjoy the company of open country birds, meadowlarks, field, vesper, grasshopper sparrows and such. I look for the all too rare bobwhite, and enjoy glimpses of my friend the red fox as he streaks along the wall with field mice for his kits, mice from the weedy field,—a basic food he shares with hawk, owl and crow.

It's time now to take another walk with the dog. Meanwhile please don't ask me, "Just what is a weed?"

Cinquefoil (left)
Celandine (right)

TROUT, or SALMON?

STRANGE as it may seem, a difficult problem exists in the identification of those highly prized game fishes of the trout and salmon clan. Experienced sportsmen who have taken hundreds of the more common salmonoids—brook, brown, rainbow and lake trout—or have made the acquaintance of landlocked salmon or perhaps red salmon, sometimes scratch their heads over some specimen whose face is slightly familiar but whose name just escapes them. Even the hatchery man, accustomed to handling thousands of individual fish, or the ichthyologist, with the aid of preserved specimens and microscope, may be stumped for the correct answer.

The reason for this in New York waters is to be explained in part by the number of species involved, but a more important factor is the great variability within each species. Obviously, a fish changes greatly in the normal course of development from egg to fry, immature, and adult stages. But even when you have fully acquainted yourself with the basic framework of such regular changes, you must then watch out for other pitfalls. For example, immature Atlantic salmon may be expected to have two forms, the so-called parr and smolt stages, one with red spots and the other with plain silver coloration and without the spots. Brook trout fed on some foods will fail to develop red spots. Brown trout, usually having red spots in streams, may fail to show them in lakes. Moreover, the power to change color almost instantly, light or dark, according to background conditions is an added starter to be considered as having an excellent chance to upset the form charts compiled from the carefully prepared book descriptions of fish.

Perhaps it was his familiarity with fishes which led one of the great naturalists of all time, Louis Agassiz, to caution his students; "Study Nature, not books." Truly, where fish are concerned, books are inadequate. In presenting brief hints on identification, including drawings, we can hope only to help you to know *what to look for* in identification of the salmonoid fish you may chance to catch.

Only the species known to inhabit New York waters are included. One is the brook, native or speckled trout (*Salvelinus fontinalis*) which is known to most anglers. Other well-known fish are the brown, German brown or Loch Leven trout (*Salmo trutta*) and the rainbow, steelhead or California trout (*Salmo gairdnerii*). Anglers who fish for it in the lakes will regard the lake trout or salmon trout (*Cristivomer namayeush*) as a familiar species. The Atlantic salmon or landlocked salmon (*Salmo salar*) is found in fewer waters. The red, sock-eye or blueback salmon (*Oncorhynchus nerka*) is being experimentally stocked in a number of waters.

By considering species only and ignoring minor differentiations, whether called subspecies or merely races, we can reduce the list to these six and avoid such controversial ground as whether what we call landlocked salmon are really different from sea-run Atlantic salmon, whether rainbows and steelheads are exactly the same, whether brown trout and Loch Levens are identical and whether the small, freshwater red salmon known as Kokanee or little redfish in western lakes is genetically different from the sea-run red salmon.

The illustrations have been prepared to show the principal features which would be useful in identification of small-sized specimens, say about seven inches. This is a convenient size for several reasons. Law abiding anglers need not identify fish smaller than this for they would return any salmonoid protected by seven-inch limit and would suffer no great hardship if they returned a red salmon of smaller size, even though not a protected species. At above seven inches Atlantic salmon would usually have lost the red spots of the parr stage and have put on the silvery dress of a smolt, so both colorations can be shown in the illustration. Where lake populations of rainbow or brown trout have a silvery variation, comparable to the smolt stages of salmon, this could happen at sizes as small as seven inches.

Searching for points of difference, not similarity, will make the task of identification of salmonoid fishes easier. For example, three species are capable of becoming bright silvery with X-shaped black spots on the body. Immature Atlantic salmon, rainbows (steelheads) in many lakes or brown trout in quite a few lakes can look much alike. In this very silvery coloration the salmon will show dusky pectoral and adipose fins, the brown trout will show yellowish pectoral fins and a tinge of reddish on adipose fin, and the rainbow will show black spots or black edging on the adipose fin.

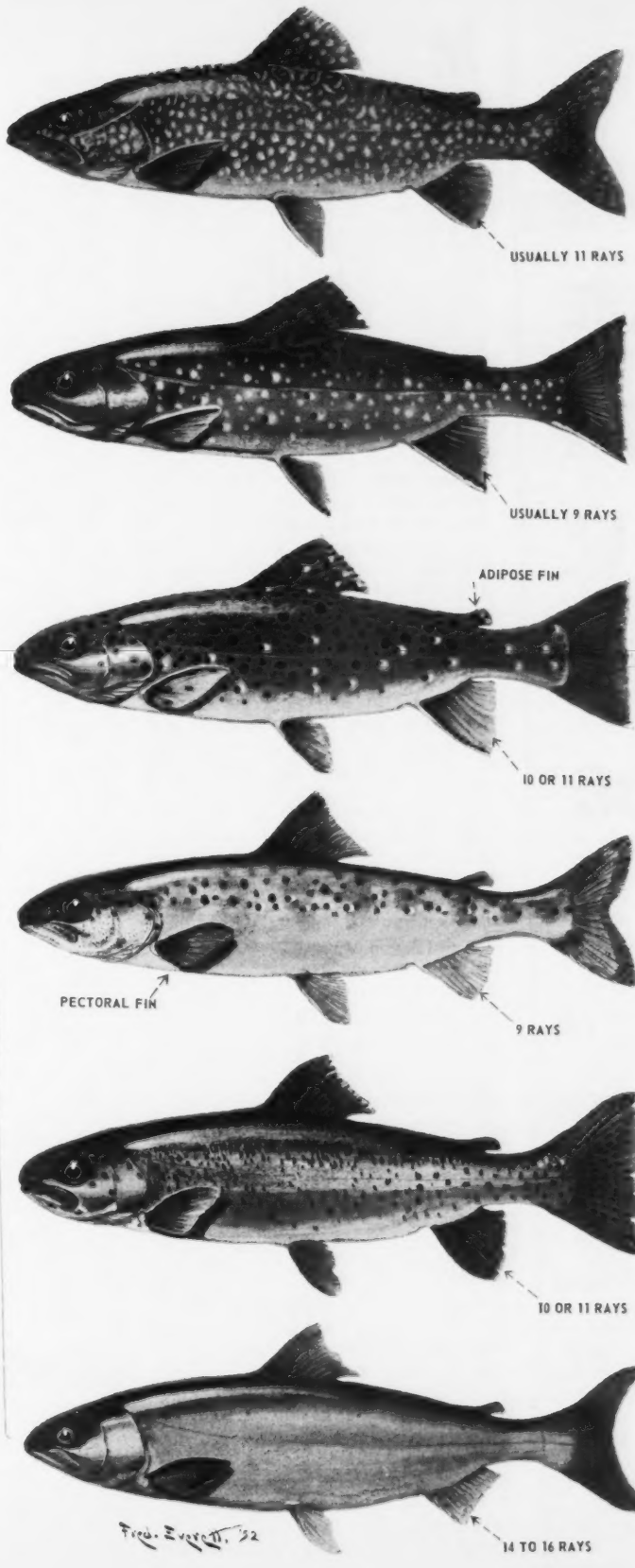
Unfortunately, some of the useful recognition marks consistently found in wild trout of several species are not found in most hatchery-reared trout. Many anglers who know the familiar brook trout by its red spots and conspicuous white edging of fins may encounter recently-planted brookies without red spots and with less contrast in fin markings due to pale background color. The reddish tinge on brown trout is not present on many hatchery specimens. Normal coloration is in time regained by planted trout.

Everyone, whether or not experienced in handling fish, will recognize the types of differences which really count. To tell poison ivy from Virginia creeper at a glance, you look for the three leaves of the ivy instead of the five of the creeper. Cataloguing a multitude of other differences of stem, flowers, fruit, etc. is all right in a botanical book but perhaps only confuses the beginner.

Unfortunately, it may be necessary to learn a few anatomical terms applying to fins and other structures of fish to check on the diagnostic identification characters. Those who claim it is the little things that count for most might point to the adipose fin, a rudimentary little tab on the back of a salmonoid fish between dorsal fin and tail. Barring the odd chance that you may catch a trout or salmon from which this fin has been clipped in an experiment to check survival of stocked fish, your fish will have an adipose and you will find this fin useful in telling salmonoids from non-salmonoids. Although this little fin is not monopolized by salmon and trout, (being found also in bullheads, smelt, whitefish and ciscoes), it helps place a fish in its proper group. Within the trout and salmon tribe, the adipose fin may help pin identification down closely (see illustrations).

ASSUMING a good knowledge of Conservation Laws and fish identification, the angler will know whether or not he can keep a fish as soon as it is captured. He will not get himself in trouble by mistaking a legal-sized brook trout "keeper" for an illegal-sized lake trout that must be thrown back, nor will he do his fellow anglers an injustice by keeping short salmon through mistaking them for legal-sized brown trout. Apart from these practical considerations, including money saved by avoiding fines for law violation, it is to be hoped that knowing more about fish identification will add to the enjoyment of the sport of angling.

—JOHN R. GREELEY


LAKE TROUT
Whitish markings on darker background
Tail forked
USUALLY 11 RAYS
No black spots
Scales very fine
(More than 190 in lateral line)
BROOK TROUT
Wavy dark markings
Red spots sometimes absent in young and hatchery fish
Fins usually have strong black and white edging
USUALLY 9 RAYS
ADIPOSE FIN
BROWN TROUT
Red spots often absent
Adipose fin usually reddish
10 OR 11 RAYS
LANDLOCKED AND ATLANTIC SALMON
Red spots only in young
Tail forked in young
Pectoral fin usually blackish
PECTORAL FIN
9 RAYS
Black spots
Scales coarse
(Less than 145 in lateral line)
RAINBOW (STEELHEAD) TROUT
Red stripe often absent
Tail heavily spotted
10 OR 11 RAYS
RED or SOCKEYE SALMON
Black markings often faint
Fred. Everett, '52
14 TO 16 RAYS

report ON THE division OF fish AND game

highlights of the study made by IRA GABRIELSON director the wildlife management institute, Washington D.C.

MANY sportsmen are curious as to what outsiders think about their State's fish and game program. The people in your State Conservation Department have the same kind of curiosity. That's why we welcomed a thorough study of New York's fish and game organization and its activities by one of the country's leading conservation authorities, Dr. Ira N. Gabrielson.

Dr. Gabrielson has turned in his report. Commissioner Duryea's Advisory Committee on Fish and Game has had opportunity to go over it, and it's now possible to present a summary of the recommendations in the report and the action planned with regard to them.

Amendment of the Conservation Law to give the Department authority to establish by regulation seasons, bag limits and manner and means by which fish and game may be taken was his first recommendation with regard to laws. Discussing this, Dr. Gabrielson commented:

"The basic laws establishing the Department of Conservation and the Division of Fish and Game are definite, but fail to give the Department adequate authority to manage the harvest of fur, fish and game according to the crop available. The Department has only limited authority for managing deer, pheasants, grouse, hares, rabbits and muskrats. The authority is limited to specific areas in some cases and is granted for limited periods. In fact, it is so limited that it is difficult if not impossible to establish and carry out long-time management plans. Except for these temporary laws, the Department has only emergency authority to close seasons in case of drastic declines in game or fish species. Even the limited authority is circumscribed by many special or local laws establishing special size limits, seasons, bag limits, and manner or means of harvesting the fish and game. Some of these laws may be good management in one season and bad management in another.

"The harvestable crop of most small game is an annual one—that is, the percentage of fall populations that can safely be harvested is determined by the success of the last-breeding season. Deer and other big game as well as fish often require extensive cropping for a number of reasons to prevent the build-up of local over-populations. If the wildlife resources are to be managed efficiently, it is sometimes as important to be able to take an adequate harvest as it is to be sure that there is no overharvesting. This is possible only by giving the management authority discretionary power since laws can seldom be changed by legislative action rapidly enough to meet the fluctuations that may occur in fish and game populations."

On this proposal, the New York State Conservation Council plans to introduce a bill extending this regulatory authority to the Department.

Although he did not say so in the report, Dr. Gabrielson commented publicly before the State Conservation Council at Buffalo that New York's fish and game law was "about as confused a mess" as a result of constant amendment as any he had ever seen. Revision and recodification is necessary to correct this, and the need for this is being brought to the attention of the proper Legislative committee.

Because Dr. Gabrielson found only two Bureaus—Law Enforcement and Marine Fisheries—set up by law, while all the others had been created administratively, he proposed the repeal of the sections establishing these two. Further examination, however, reveals that Section 160 which concerns Law Enforcement also lists the specific law enforcement officers whose powers for fish and game protection are defined in a subsequent section. Therefore, the section cannot be eliminated. However, as the first step to attain the administrative flexibility sought by Dr. Gabrielson, it is proposed to amend this section to make action discretionary rather than mandatory and to delete provisions for specific numbers in relation to the various jobs.

In regard to establishing penalties and license fees, Dr. Gabrielson recommended no change from present procedure—which provides for control by the Legislature. He held it is not good practice for an administrative agency to have such authority. He approved laws providing police powers and powers of search and seizure. He urged continuation of the definition pattern for birds (under which all birds are protected except those specifically listed as unprotected) and suggested a similar pattern for mammals, fish and other wildlife. However, because of the vast numbers of species of minnows, shrews, mice, etc., which are unprotected in New York, this is felt impractical.

The first organizational recommendation was for streamlining the accounting structure. This will be done.

On the Law Enforcement front, Dr. Gabrielson pointed out efforts had been made to encourage game protective personnel to take a broad interest in

conservation activities, but that acceptance of such a viewpoint has not yet become widespread since at least a portion of the staff "still consider it almost if not entirely a pure law enforcement job." He pointed out reports now emphasize arrests and convictions, and he recommended that report forms be revised to list other valuable activities so participation in them by Protectors will be encouraged. This will point up good work now done. Deletion from the reports of the vermin kill was a further recommendation. These changes are being carried out and the next revision of the Game Protector's Manual will embody his additional suggestion that it specifically outline the additional activities Protectors are encouraged to pursue.

Pointing to the present organization of Game Protectors and Assistants, Dr. Gabrielson commented it averaged one field supervisory officer to every five enforcement men, a higher ratio than is necessary from a sound administrative viewpoint. He suggested a gradual reduction until there is not more than one Assistant in each district. This could be done by not filling vacancies as they occur. He also recommended that Game Protectors' positions be reclassified into two or more grades in order to stimulate incentive.

Both problems are being jointly studied to determine the possibility of solving them by the establishment of a series of grades for Protectors which will protect the salaries of all present Assistants and provide a reward for Protectors who carry on the broader conservation activity now needed in these jobs. All these improvements are being given attention in the current reorganization of the Law Enforcement unit.

The transfer of the issuance of special licenses and permits to the Bureau of Law Enforcement—another suggestion based on the fact that this Bureau now has the only State-wide field staff —is not to be carried out. The reason is this: Under the proposed new Statewide set-up of common offices for fisheries, game and law enforcement district personnel, the necessary screening of these licenses by fish and game technicians will be possible on a most effective scale. This district office consolidation also will make available a pool of stenographic and clerical personnel which will eliminate the necessity for Game Protectors to be called in to issue licenses in rush periods, thus diverting them from field work.

In fisheries, where research has not been as extensive as in game because of the absence of P-R (Federal Aid) funds, Dr. Gabrielson proposed concentrating all fishery research activities in the fisheries section of the Bureau of Fish and Wildlife Investigations. He also recommended the reorganization of all fisheries management work, now spread among several bureaus, into a single Bureau of Fisheries Management. The Department's own previous planning incorporates the principles of these two proposals, and they will be carried out as fast as a new fisheries section can be created and the consolidation of bureaus carried out without present personnel being adversely affected. A similar procedure is planned in the consolidation of the Bureau of Game Farms and the Bureau of Game Management.

Discussing Civil Service, the report comments that recommendations for changes in Civil Service laws and procedure were not within the scope of the study, but suggests efforts to get liberalized regulations making it easier to recognize qualities of leadership and to develop more simplified procedures for the separation of poor personnel.

On the work of the Division of Conservation Education for fish and game, Dr. Gabrielson calls the program excellent, THE CONSERVATIONIST among the top magazines in the field, the film library exceptionally good, and adds that the educational program is well balanced and developed.

Pointing out that New York's fees are below the average of neighboring States for resident hunting and resident fishing licenses, and about average for the combination, Dr. Gabrielson recommended that, as work is expanded, efforts be made to provide additional funds by increased fees or from general funds. The Department feels, however, that the Conservation Fund is in good shape and—if the present trend continues—the fish and game program can be carried on without need of additional funds.

The Commissioner's Advisory Council endorsed the recommendation for creation of a small highly trained group of enforcement men, to be moved into trouble areas where persistent violations occur. Further, a new motorcycle unit, to be available in areas of heavy concentration of hunters and anglers, is planned.

The proposal that enforcement in the Marine District be handled by the Bureau of Law Enforcement has been adopted. All shellfish inspectors are henceforth to be responsible to the Superintendent of Law Enforcement for enforcement activities, and to the Superintendent of Marine Fisheries for the management duties which they also perform.

According to Dr. Gabrielson, the division of Fish and Game has reason to be proud of the quality and character of its research programs. He added that no State he has studied has surpassed New York in the quality of its wildlife research, and that the same could be said of our fishery research.

[redacted]

Nevertheless, he recommended an expansion of the fisheries research staff to permit more rapid handling of basic growth and survival studies, biological studies of former productive waters, and critical studies of the present fish stocking program. Assignment of some of the staff to research studies in the Marine District also was suggested. These proposals are already being acted upon: Expansion of fisheries work is scheduled; some studies of the type suggested already are set up at Cornell; others are now being instituted with Dingell-Johnson (Federal Aid) funds, and a weak fish study is being organized for Peconic Bay in the Marine District.

The program of game management was described as comprehensive, forward-looking and flexible. No change was suggested other than closer integration of game farms with management activities. As in fish planting, the inauguration of carefully planned checks to determine the success of the present game stocking program was recommended. Many such studies are already under way, and the establishment of the balance needed to determine the facts about stocking has been made the responsibility of the Assistant Director of Fish and Game (Dr. W. C. Senning) and given highest priority.

To summarize a 69-page report in this fashion obviously brings out only the highlights, with a minimum of detail. We would like to have printed it in full, but that is of course, impossible here. However, if you want more detail, you're invited to read the copies in the Albany office that are available to anyone who wants to see them.

Judging by Dr. Gabrielson's comments, New York's program for fish and game (and the organization to carry it out) seem generally satisfactory. The Commissioner's Advisory Committee went farther, remarking that this was certainly a commendatory report. But we would also like to point out that no time has been lost in putting into effect the changes suggested by Dr. Gabrielson which are within the scope of the Department's administrative authority, and which had not already been considered and acted upon by the Department.

Saranac Locks

By J. M. Peightal

Student at N. Y. State College for Teachers, Albany

IT is safe to say that the Saranac chain of lakes (and also the Village of Saranac Lake) would not be the same if it weren't for three strategically located dams. Naturally, these water barriers are not in the same category as Boulder or Grand Coulee. These three fall into the "beaver" class. They are small dams of logs, rocks and earth from five to eight feet in height.

There is a drop in water level of about 23 feet from Upper Saranac, the westernmost of the three Saranacs in the chain, to Lake Flower, on the shores of which is Saranac Lake, the town. To control the flow of water State and local authorities have provided the three dams. The first is located between Upper Saranac and Round Lake (otherwise known as Middle Saranac) about a half mile east of Bartlett's Carry. The second dam is about three-quarters of a mile east of the outlet of Round Lake, while the third and largest is on the Saranac River between Second Pond and Oseetah Lake.

Each of these dams is provided with a set of locks for boats, because fishermen, canoers, campers and hunters turn this waterway into a busy thoroughfare in spring, summer and fall.

Although I have passed through these locks many times, they continue to be a source of fascination to me. They are all built the same. Concrete runways, sturdy oak beams and levers of iron are the main building materials. Each lock is 30 feet long and 15 feet wide. The depth of course varies with the height of the dam, the smallest being 10 feet deep and the largest 15.

The locks are manually controlled. Two men are hired by the State to work them during the summer seasons. They stay at their job, living right there in comfortable quarters, and are responsible for the maintenance of the locks and for the safety of those who pass through them.

Their traffic may include any thing from a canoe to a 20-foot cabin cruiser. The volume of traffic of course varies with the weather, but an old timer I know who has worked on the locks for ten summers estimated the traffic at 50 or 60 craft a day. Mostly outboard; the rest were canoes, guide-boats or inboards.

Mr. Ed. Lamy, the lock-watcher, of course invites each boatload into his cabin for a cup of coffee. He chats amiably with the tourists and complains good-naturedly to the natives. His favorite story is about the time that a famous lumberman's wife dropped a very valuable ring into the locks as their cruiser was passing through. No one concerned knew quite what to do; if the gate ports were opened, the ring might go through them to the river; if they weren't opened, traffic would be held up all day. The only thing to do was to dive for the ring.

Ed., as allergic to bathing as the next northwoodsman, hired some divers from waiting boats, and after two hours of diving they finally brought up the ring. Also recovered were two wristwatches, a pocket watch, a book on how to paddle a canoe, and a set of false teeth—uppers and lowers. Ed. says that he lived all winter on the reward and was an expert on the time of day. He can't remember what happened to the teeth, however.

The working of the locks is a very simple operation. If a boat is going upstream, it enters the locks. The downstream doors are closed tightly and the gate ports on the upstream gates are opened. This allows water to pass under the gates at a fast, yet safe, rate of speed. When the water level of the locks reaches the upstream level the gates are opened and the boat passes on its way. Going in the opposite direction, a boat passes into the locks through the open upper gates, which are then closed. Water is allowed to flow out the lower gates. The boat lowered to the water level below is ready to go as soon as the gates are opened. The whole operation takes less than five minutes.

THE Saranac area is famous for its magnificent scenery, fishing, hunting, camping. If you travel the water route, and if you happen to run into Ed. Lamy, he might even let you put your own boat through the locks.

Extensive plantings of native trees and shrubs have been employed along this highway to soften effect of bridge structure and provide parklike character for the motorist

Conservation at the Roadside

From material compiled by the Landscape Bureau, Department of Public Works

THE purpose of this article, and especially of the photographs that illustrate it, is to point out that you don't have to get off the main road to see conservation at work. You don't even have to get out of your car.

Empire Staters do an incredible amount of driving, and so most of us are familiar with the new highways and parkways and thruways that conduct us from here to there. Most of us seem to feel that driving on such routes is pleasant driving, not just because the surface is good and we can make good time, but because the things we see as we drive along make the trip more interesting, less tiring—in general, more pleasant. What most of us don't realize is the extent of the planning for our safety, comfort, enjoyment and even education that has been put into the designing and landscaping of these thoroughfares. Least of all do we realize the extent to which conservation applies in such planning.

As you drive along, you might ask: "On that bank there, why the strips of sod?" *Erosion control, to keep the bank from washing into that drainage ditch.* "Those mounds of dirt back from the road, what are they for?" *That's topsoil, saved and stockpiled during the grading operations for later use.* "What's that hay doing down there in the ditch?" *It's not hay; it's low grade material unfit for livestock, and it's being used here as a mulch. This kind of mulching has made it possible to establish a good stand of grass on thousands of acres of highway roadside, without the use of topsoil.* "That machine spraying the banks with a hose—what's it doing?" *Spraying lime, seed and fertilizer, all at once, so as to get a good cover crop started on that bare soil.*

"Those low-growing evergreens in the 'island' separating north and south bound traffic, they certainly look nice." *Yes, but that's not the main reason why they were planted there; the main reason is to protect your eyes from headlights coming at you.* "That's a nice line of old maples; it's a wonder they bothered to split the highway just to save them." *No wonder at all. In designing our highways, every effort is made to save not only trees but all interesting or attractive natural features of the landscape.* "It's interesting how the landscaping sort of narrows down as you come to that curve in the road." *The idea is to center your attention on the road, so that you'll make that curve safely.*

THE photographs on the following pages shows some of the things that are being done in the interest of conservation (both human and otherwise) in the designing and landscaping of our new highways.

Complete sodding is necessary in drainageways to check erosion; mulch prevented this on slope. Route 20 near Sharon Springs

ABOVE: Thruway near Catskill. Native seedling growth is relied upon in general. Seeded fill slope will be permitted to grow up to native trees and shrubs back of guide rail, giving motorist sense of security. BELOW: lime, fertilizer and grass seed, mixed, are spread by water pressure on Route 24 near Broadalbin. About eight acres can be seeded in a day using this method

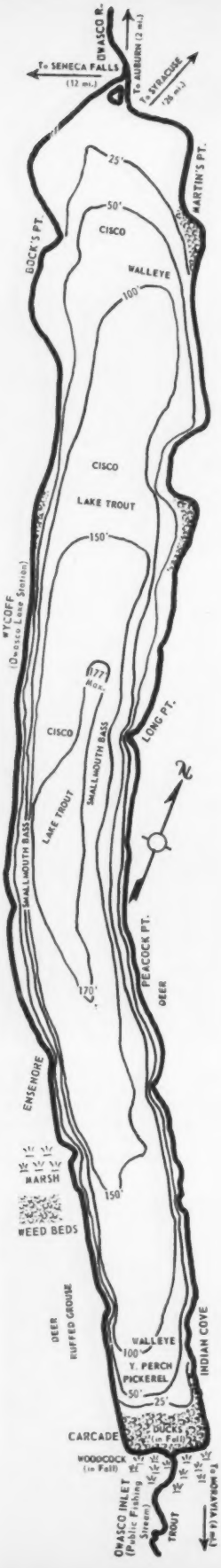
ABOVE: Strips of sod on steep slopes check erosion until the grass is established by seeding. RIGHT: topsoil needed for seeded or sodded areas is saved and stockpiled during grading. BELOW: Whitestone Parkway. Hedges between traffic lanes reduce headlight glare. Ground cover on steep slopes stops erosion

Raw slopes on Jericho Turnpike were seeded to prevent erosion and to improve appearances. Right is result of about sixty-day growth where millet was used to make quick cover until the slower growing grasses became established. Millet provides protection and food for birds and animals

LEFT: Mulch provides immediate protection from erosion. Erosion on unmulched area of fine silty clay (extreme left in photo) is compared with areas seeded and mulched three months earlier. Surface water from hillside has been cut off by a shallow interceptor ditch above the eroded area

ABOVE: Route 20 near Cazenovia. Poor trees are removed, good ones cared for. BELOW: heavy planting to center driver's attention on the road at approach to Rip Van Winkle Bridge

BELOW: Shows the use of low growing evergreen trees between traffic lanes on Taconic Parkway to reduce glare of headlights and add interest to landscape. Red cedar was used in this section but similar effect is also obtained from use of dense growing deciduous shrubs



OWASCO LAKE

LOCATION:
Southern Cayuga County

PHYSICAL FEATURES:
Area: 10.3 square miles
Elevation: 770 feet
Maximum Depth: 177 feet
Length: 10.75 miles
Maximum Width: 1.25 miles
Drainage Area: 204 square miles
Water: Medium hard
Oxygen: Good all depths
pH: Alkaline

FISH:
Lake trout
Rainbow trout
Pikeperch
Yellow perch
Smallmouth bass
Rock bass
Cisco (2 species)
Smelt
Chain pickerel
Common sunfish
Common sucker
Sturgeon sucker
Bullhead catfish
Tadpole catfish
Carp
American eel
Minnows (18 species)

HISTORICAL:
From Indian name "Osco" meaning crossing place

GENERAL:
Water supply for City of Auburn; numerous camps around lake; active sailing club; excellent swimming; several boat liveries and accommodations for fishermen

FISHING NOTES:
Lake trout: In the spring, still fishing near shore or surface trolling. In summer, copper line fishing, bobbing or Seth Green rig
Smallmouth bass: Over bars or off points about 12 feet of water—deeper in the fall; night fly-fishing good early July
Pikeperch: June bug spinner best
Yellow perch: In or near weed beds about 10 feet of water
Smelt: Taken in tributaries at south end in spring, not to exceed 30 for personal use only

SPECIAL:
Most famous sport fishery for ciscoes in State. Use big mayfly on surface at dusk late May and early June

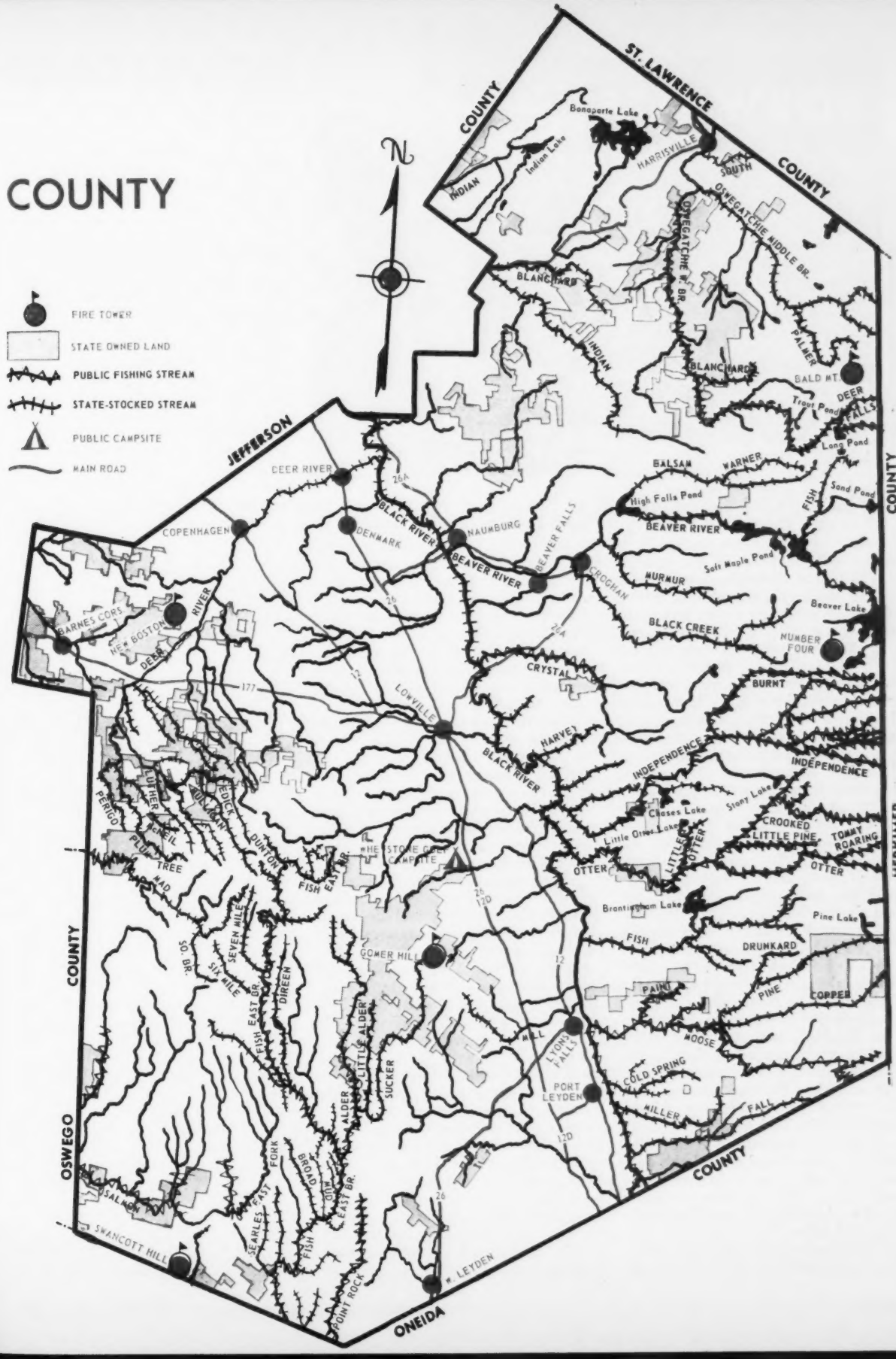
LEWIS

THERE are only a few lakes in Lewis County, but so many streams that if all were shown on the map, there would be no room for the names. It is a trout fisherman's paradise with the greatest concentration of free, public fishing-right streams of any county. However, roads are few and to reach many of the waters requires a hardy constitution. It is a land for rugged individualists who want to enjoy nature in the raw.

A total of 3,401,871 fish were stocked in 1951. Of this amount 398,526 were trout—267,035 brook trout, 94,307 browns and 37,184 rainbows. The Black River and Bonaparte, Brantingham and Indian lakes received 3,000,000 walleye (pike-perch) fry and Chase Lake got 2,000 smallmouth bass. Only streams stocked with more than 500 trout could be named. A complete list of the streams stocked and the species and number may be had by request from the Albany office. A booklet with maps, showing the locations of the public fishing rights and giving brief descriptions of each stream, will be available for free distribution this spring. Write for it.

There are no State-maintained trails or leantos, and only one public campsite at Whetstone Gulf. Part of the county is in the Adirondack Park but most of the State-owned land is scattered over the county as reforestation (State Forest) areas, all of which are open for public use. Five fire towers are strategically located as part of the forest fire control program.

Parts of the watersheds of three major rivers, the Black, Oswegatchie and Salmon, are in this county, one of the main tributaries being the Moose River. Hunting is exceptionally good for those who can rough it. Deer are plentiful, but must be toted long distances by successful hunters to reach a road.


COUNTY
FIRE TOWER
STATE OWNED LAND
PUBLIC FISHING STREAM
STATE-STOCKED STREAM
PUBLIC CAMPSITE
MAIN ROAD
N
ST. LAWRENCE COUNTY
JEFFERSON COUNTY
HERKIMER COUNTY
OSWEGO COUNTY
ONEIDA COUNTY
Bonaparte Lake
Indian Lake
INDIAN
HARRISVILLE
SOUTH
OTTER CREEK
OSWEGATCHIE MIDDLE BR.
OSWEGATCHIE N. BR.
BLANCHARD
INDIAN
PALMER
BLANCHARD
BALD MT.
DEER
FALLS
Trout Pond
Long Pond
BALSAM
WARNER
High Falls Pond
FISH
Sand Pond
BEAVER RIVER
Soft Maple Pond
MURMUR
Beaver Lake
BLACK CREEK
NUMBER FOUR
CROGHAN
BEAVER FALLS
DEER RIVER
COPENHAGEN
DENMARK
BLACK RIVER
NAUMBURG
BEAVER RIVER
BARNES CORS
NEW BOSTON
DEER
RIVER
LOWVILLE
CRYSTAL
BURNT
HARVEY
BLACK RIVER
INDEPENDENCE
INDEPENDENCE
Chases Lake
Stony Lake
Little Otter Lake
LITTLE OTTER
CROOKED
LITTLE PINE
TOMMY
ROARING
OTTER
OTTER
LUTHER
PERCH
TREE
MAD
KELLOGG
DUNTON
FISH EAST BR.
STONE DAM CAMPSITE
Brantingham Lake
Pine Lake
FISH
DRUNKARD
PINE
COPPER
PAINE
MOOSE
GOMER HILL
SO. BR.
SIX MILE
SEVEN MILE
FISH EAST BR.
DIREEN
ALDER
LITTLE ALDER
SUCKER
MILL
LYONS FALLS
PORT LEYDEN
COLD SPRING
MILLER
FALL
SALMON
SEARLES
EAST FORK
BROAD
FISH
EAST BR.
POINT ROCK
SWANCOTT HILL
LEYDEN
26
26A
12
12D
177

BOBWHITE

FAUNA

ARISTOCRATS die hard, and the bobwhite quail is no exception. Once found in practically every New York county except metropolitan and mountainous ones, the bobwhite today is a mere shadow of its former self. Spotted over some sections of the Hudson Valley, on Long Island, and in a handful of isolated places, scant coveys maintain a mere toe hold in once productive range. Yet the bobwhite has not given up, and game surveys of the past couple of years reveal a general upswing in quail populations and a slight extension of range. To sportsmen and bird lovers everywhere this means a return of the native.

If you had lived on a New York farm 40 years ago it would have been easy to acquaint yourself with the bobwhite. It is a bird about the size of a meadowlark, compact, and styled much like a young chicken. But unlike a chicken the quail seems always in gear, overflowing with vitality. In fact, chances are you awoke on a brisk April morning with the clear ringing whistle of "bobwhite, bobwhite" in your ears. You probably found the gay fellow perched high on a rail fence, and identification was easy because of his conspicuous white throat and the white strips over his eye. Identification is still easy, but today Long Island's Suffolk County is the quail's last real outpost in New York.

The history of the bobwhite's rise and fall in this State is quite similar to that in other northern states where the bird has undergone innumerable ups and downs from pre-white settlement to the present time. It is a safe assumption that before the colonization of New York bobwhites were not abundant—perhaps not even present in the State. During this period unbroken forests probably prevented infiltration from the bird's optimum range in the southern and southeastern parts of the country, although scattered coveys may have existed on the open grasslands and low vegetation along the shores of Long Island and the Hudson River.

Then came the settlement era. Forests were opened, and New York's rich, unspoiled soil soon supported many small farms. The bobwhite was quick to take advantage of favorable conditions and follow the plow of the pioneer into heretofore uninhabited range. The cutting of dense forests, the breaking of new sod, and the tilling of soil through crude means permitted the growth of good nesting and protective cover. The rest was up to the bobwhite, and he was not found wanting.

In retrospect, from the settlement era to about the close of the last century quail made their greatest gains. Probably the highest population was reached during the mid-1800's. At that time most farms were perfect quail management units, with abundant brushy stump lots, weedy rail fences, thick hedges, sufficient clearings, and adequate winter cover. In those days most farmers, untainted by spic 'n span farming, were self-made quail managers.

But about the beginning of this century the present era of intensified agriculture got under way. In affect it has brought about a general reduction of quail range and numbers through the destruction and disruption of the small management unit. The once full hedges were uprooted; the brushy woodlots were converted to naked pastures or "cash crop" fields; and the weedy fences were replaced by immaculate wire ones or none at all. So today, those interested in the bobwhite are faced with the task of rebuilding his habitat through the proper planting of trees, hedges, and wildlife borders. Theirs is the systematic job of strategically placing food and cover to simulate the small management unit.

These basic facts have not always been appreciated. When, over two decades ago, it was realized that bobwhite populations were on the way down, the true cause of the decline was not readily understood. Screams about predators, the hunter's gun, and the relentlessness of certain bird dogs were echoed many times. Some sportsmen even went so far as to introduce thousands of quail of southern and Mexican origin to bolster the decreasing population of native birds. Needless to say, these imports failed to accomplish what natural populations were incapable of doing in worn out coverts.

As for vital statistics, quail pair off in the spring—late March and April—and remain together until fall. An average clutch contains 14 white to light brown eggs smaller than those laid by a bantam. Incubation takes 23 days.

Fortunately, with the development of successful methods of rearing bobwhites, the State took the lead in restoring a strong strain of quail. In 1932 the Department established its present quail farm at Middle Island. Here great advances have been made in producing vigorous stock — presently about 6,000 quail each year. These are used chiefly to restock suitable areas, although some birds also go to supplement native populations, and a few are used for experimental purposes.

But it must be admitted that wildlife technicians who have studied the quail feel that at best New York State is probably only peripheral range. This, of course, is hard to take when you realize that the bobwhite once treaded into Maine. But the bird's range is now considered to be bounded on the north by an indefinite barrier of low winter temperatures which in this State appears to restrict quail to the lower Hudson (including Long Island) region.

THE chief factor limiting future quail increases in New York appears to be the bird's inability to withstand adverse winter weather. That is why any future population increases will depend heavily upon providing adequate cover in the right places for the right months of the year. This means that winter cover—plenty of it —will play an important role in the restoration of quail and also in the extension of their range in New York. Such a habitat improvement program was started by the Department in 1948 (PR-48-D), and better homes for bobwhites are already in the making.

Moreover, recent surveys by the Department, particularly on Long Island, reveal that the bobwhite is on his way back. Encouraged by a series of mild winters, plenty of food, and reluctance on the part of many sportsmen to hunt quail until they build up again, he has responded remarkably in the past two years. We all wish him well in his bid for a comeback.

—James E. Lawrence,
Ass't. Game Research Investigator

Not a plantation, but natural reproduction of Adirondack red pine after cutting

why don't we make the lumbermen reforest?

WRITTEN on the deer tag report received from a citizen of St. Lawrence County last fall, we found a note reading: "When are you fellows going to enact legislation to make those lumbermen reforest?"

In one respect, it is gratifying to receive a message of this kind because it shows that one sportsman at least has an active interest in the trees of the North Country as well as the deer. On the other hand, it does illustrate two of the popular misconceptions about forest conservation, and therefore seems worthy of further discussion here. First, there is the suggestion that we ought to *make* the lumbermen do this thing or that. And second, there is the idea that the cure for lumbering is reforestation. We will discuss these misconceptions separately.

So far as *making* the lumberman do something, or curbing his activities, the best answer is that the place to start is not with the lumberman but with the woodland owner. If we can convince the woodland owner that good cutting practices are good business for him, *he* will be the one who will tell the lumberman what to do or not to do. Under the Forest Practice Act we are now cooperating with 3,100 of these owners, by giving them technical advice and tree-marking service, so that their timber will be cut in a way that will prevent over-cutting or the slashing down of immature trees which should be allowed to grow longer.

On point two, as to making the lumberman *reforest*, we come face to face with a technical consideration which is well understood by the professional foresters, but certainly not as well understood as it should be by the public at large. Last spring we shipped 34 million trees from the State nurseries, for reforestation. But where were they planted? At least 90 per cent were planted on old fields and pastures; that is, on abandoned or sub-marginal agricultural land. These acres (and there are 4 or 5 million of them in the State), are lands which never should have been cleared in the first place because they were too poor or too rocky or too steep, and what we are trying to do now is restore the forest cover. What has destroyed a large part of our forest resource here in New York during the last 150 years is not the lumberman; it was fire on the one hand, and on the other, conversion of forest land to agricultural use. You can do stupid things in lumbering, such as "cutting everything that will make a two-by-four," or cutting the best and leaving the poorest every time until nothing but scrubs are left. That way, you will cut down the efficiency of the forest as a wood-producing concern, perhaps almost to the zero point, but you won't destroy the basic resource. To do that, you've got to burn it over two or three times or else cut it clean and turn the cows in, or plow it up and make crop land out of it. That's what the early settlers did, and they really thought they were doing something when they "cleared off."

Now, about reforesting lumbered areas: *There are hardly any situations in New York where the forest won't reproduce itself naturally after logging, if given half a chance.* By "half a chance," we mean keeping out fire and cattle. It's as simple as that. In the Ausable Valley pine country you can find areas where the pine has been absolutely clearcut, but which within a few years will have 20,000 pine seedlings to the acre. In the Adirondack spruce and hardwood types, most of the early attempts to reforest after lumbering were failures because the native hardwood reproduction just took over. There is a tract up near Parishville where something like 500,000 spruce seedlings were planted by a lumber company on a cut-over about 1905. You've got to look close to find a planted tree there today. What you will find is a very heavy stand of second-growth hardwood, with a considerable mixture of native red spruce.

Of course, the *kind* of forest reproduction you get after logging can be controlled to quite an extent by the cutting methods used. This is especially true where the object is to bring in softwood (spruce or pine) against hardwood competition. In such cases it is important to keep a sufficient canopy of mature softwoods on the area until the new seedlings are established. In the language of the trade, this is called the "shelterwood system," and you can find some splendid examples of its application on the Pack Demonstration Forest operated by the State College of Forestry a few miles north of Warrensburg on U. S. Route 9.

TO summarize: 1) Don't blame the lumberman for everything. Most of the time, he only cuts the trees that some woodland owner lets him cut. What both he and the owner need is not more regulation, but more technical information on what constitutes good cutting practices—and that's what we're trying to give them under the Forest Practice Act. 2) The idea of "cut a tree, plant a tree" is a myth, so far as most of New York is concerned. Unless the forest cover is totally destroyed, the native woods will reproduce themselves, in one fashion or another, after almost any kind of logging. The place to plant trees is where there isn't any forest at all—mainly on land which has been cleared, then cultivated or pastured, and then abandoned. The natural woods will take care of themselves, but the "lost lands" of our abandoned or nonoperating farms need a lot of help.

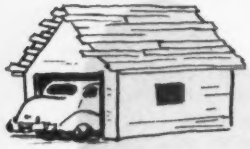
—E. W. LITTLEFIELD

What's in A

RED SPRUCE

In New York, red spruce is our most abundant and most important conifer. It occurs in commercial quantities throughout the Adirondacks and, to a very minor extent, in the western Catskills. A little spruce is sawed into lumber, but by far the biggest part of the cut of this species and its common associate, balsam fir, goes into pulpwood to help feed 28 pulpmills.

Even so, home-grown timber supplies only a quarter of our fiber requirements —the rest has to come from New England and Canada. Our sample tree is 18" dbh, 70 feet tall, might be anywhere from 100 to 300 years old, depending on how long it stood in the shade.



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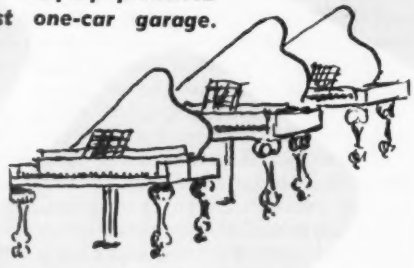
There would be enough 1" x 8" shiplap produced to put the roof on a modest one-car garage.



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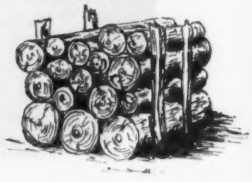
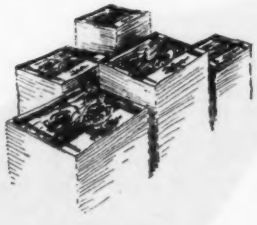


Or, if it were extra high quality, the butt might be quarter-sawn into sounding boards—enough for two or three pianos.

By the time this got through the chipper, it would make a pile of chips that would bury a man to the neck.



If sawn into lath, it would cover enough lath racks to keep the sun off a hundred thousand seedlings in our Saratoga and Lowville nurseries.

Made into coated book paper, it would be enough for 4,000 copies of your Conservationist.

A TREE?

SUGAR MAPLE

Sugar maple is our most widespread
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In commercial size and quality,
it is found about everywhere except in the higher Adirondacks.
Perhaps the finest timber comes from the southeastern Adirondacks,
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Maple goes into a wide variety of products: flooring, furniture, novelties, railroad ties and,
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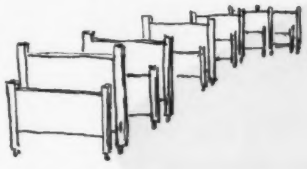

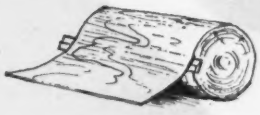

If turned off into veneer,
it would cut enough
to face 100 table-tops
or 160 television cabinets
or, in lower grades, to make 50 shipping boxes.

If sawed up into furniture stock, it would make six blonde maple bedsteads,
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Truly, wood surrounds us "from cradle to grave." Its uses are infinitely varied. New York has a wide variety of commercial timbers, uses them to make a lot of different things. The more we learn about it, the more things we do with it.

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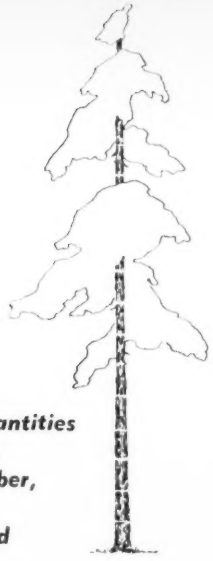

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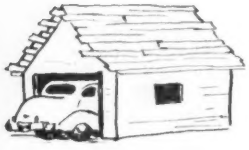

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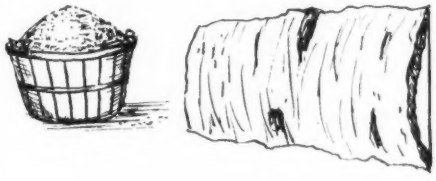

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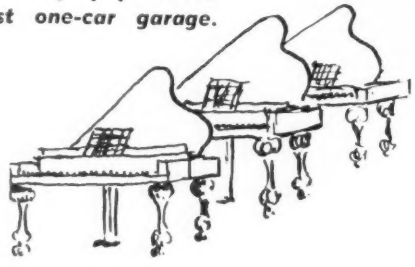

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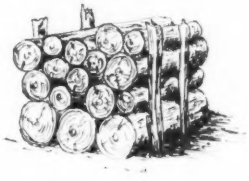

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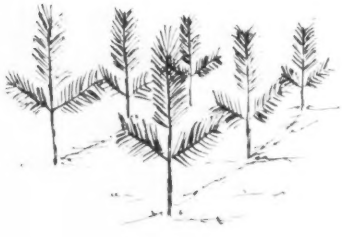

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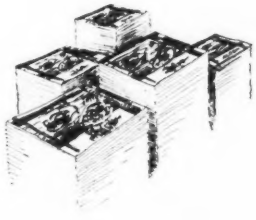

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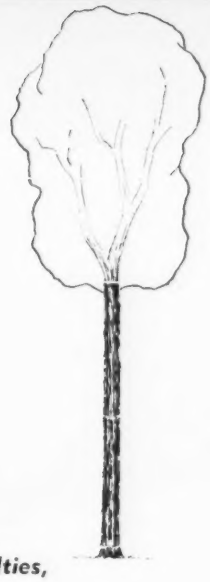

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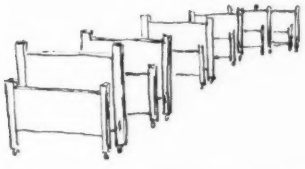

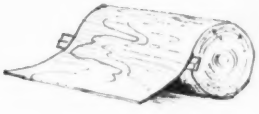

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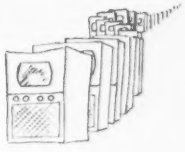

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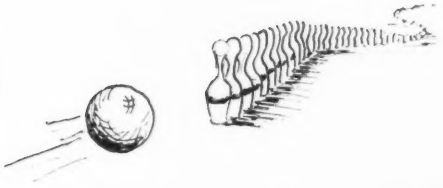

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Adirondack Deer Problem

FOURTH SUCCESSIVE MILD WINTER POSES DEER MANAGEMENT QUESTION

AN urgent problem in the management of New York's Adirondack deer herd is crystalizing as this issue of THE CONSERVATIONIST goes to press. We therefore take this opportunity to present the problem, as well as our recommendations for its solution. The problem is as follows:

(1) For the past three years winters have been unusually mild. Judging by present indications, the winter now in progress is of the same character: we have already reached the half-way mark, but snow depths in the Adirondacks are well below what is normal for this time of year. Unless the character of the winter changes radically for the worse and thereafter continues to be severe for at least six weeks, deer mortality as a result of winter kill will be negligible.

(2) The virtual absence of winter mortality for a four-year period will result in an extremely large deer population in the Adirondack region, particularly in the central portion of this region. In fact, this population may represent the largest number of deer that this region has ever supported.

(3) Deer population densities over much of the central portion of this region will be considerably in excess of what the region can support during a severe winter, such as must inevitably come when the climatic pendulum swings the other way.

(4) Records show that, on the average, winters severe enough to cause high deer mortality occur about one year in every four, and that a majority of the intervening winters are of at least moderate severity. We must therefore base our deer management policies on the expectation of a severe winter in the near future—most probably the winter which will follow this fall's hunting season.

The abundance of Adirondack deer augurs well for hunting prospects this fall, but it also poses a serious management problem which requires immediate consideration and action. It is evident that when the next severe winter strikes the loss of deer in the Central Adirondacks will be very heavy if the excess numbers are not harvested beforehand in some other way.

Furthermore, not only will the region suffer a heavy loss of deer (which will merely furnish food for foxes, coyotes and bobcats) but, under starvation conditions, before these animals succumb they will consume a great deal of browse which would be better left for the deer that can survive. And still further, the hardwood shrubs that are the principal browse-producers recover slowly from such over-utilization. Thus, an excessive population of deer results in destruction of the range to a point where, in succeeding years, it cannot support even moderate populations.

Essentially, this is the problem. The solution we recommend inevitably involves a limited season on antlerless deer. In recommending such a season, the Department is fully aware that many Adirondack hunters grew up with the buck law and find it difficult to accept the idea of taking does. Nevertheless, in view of the facts that have been assembled regarding the present situation, the Department feels that it has a moral obligation to call the problem to the attention of the Legislature and the public and to propose a solution—a short open season on antlerless deer.

In the interest of both wise use of the deer themselves and maintenance of range quality, good game management dictates removal of the surplus population before next winter. It can be stated categorically that the taking of antlered bucks only will not accomplish this. Only by reducing the number of antlerless deer can the desired objective be accomplished.

As has been pointed out, this problem at present applies almost wholly to the central Adirondacks. Even here conditions are not uniform but study of the situation over a period of many years makes it evident that the need for population reduction involves a sufficient proportion to warrant action this year in view of the unprecedentedly high surplus population which is almost certain to be present next fall. Accordingly, a proposal has been drawn up for a short (six-day) open season for taking antlerless deer in the fall of 1952. It will be discussed at the public hearing on conservation legislation February 27 and may be amended thereafter.

THE territory to be included is shown on the map. In so far as is practical it embraces the section where research over the years has shown the climatic conditions adversely affecting deer to be most severe and where the heaviest losses may be expected during a severe winter. It is also the section where both the growth rate and the reproductive rate of deer have been found to be lower than anywhere else in the State as a result of poor nutrition. Moreover, the present excess of population in relation to range carrying capacity is most pronounced here and the situation has been aggravated by a reduction in shelter as a result of the 1950 hurricane. And hunting pressure has, by and large, been less in this central portion than elsewhere. In short, this is the territory where the need for a greater herd reduction than

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Limit. A person shall not take [in 1952] more than one deer.

Applicability. The provisions of this section shall be applicable only to the parts of counties hereinafter described: [See map.—Ed.]

Exception: (In the Fulton Chain Lakes area in the counties of Hamilton and Herkimer). The taking of antlerless deer is prohibited in the area between route twenty-eight and the south shore road from Old Forge to Inlet, and also between route twenty-eight and the Uncas Road to Raquette Lake.

General: All provisions of the conservation law in relation to deer insofar as the same can be made applicable shall apply to deer taken pursuant to the provisions of this section.

§ 2. This act shall take effect July first, nineteen hundred fifty-two.

AREA PROPOSED FOR ANTLERLESS DEER SEASON

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There is some reason to believe that the recommendation of such a season is conservative, and that it will not completely solve the problem. In some localities such a season may not eliminate winter mortality. The Department is aware of these possibilities, but feels that the plan proposed represents the most practical approach to the problem that is possible at the present time. In addition, the Department believes that with respect to the territory involved as a whole, the possibility that the results might be detrimental is exceedingly remote.

The fear has been expressed that a season on antlerless deer in the Adirondacks will result in too great an increase in hunting pressure there. It is important to note, however, that if Department recommendations with regard to deer seasons are followed in their entirety, such a situation should not occur. The proposed season on antlerless deer in the Adirondacks would run at the same time as similar seasons in much of the rest of the State, and thus hunting pressure would be distributed.

In summary, it appears to be in the public interest to permit deer to be taken by hunting, rather than allow them to increase to a point where severe winter kill is inevitable and long term damage is done to the range. Traditionally, all of us would prefer to take bucks only. But in the interests of both deer and deer hunting in the future, the Department's game technicians believe that positive action along the lines suggested above should be taken at once.

Adirondack Deer Problem

FOURTH SUCCESSIVE MILD WINTER POSES DEER MANAGEMENT QUESTION

AN urgent problem in the management of New York's Adirondack deer herd is crystalizing as this issue of THE CONSERVATIONIST goes to press. We therefore take this opportunity to present the problem, as well as our recommendations for its solution. The problem is as follows:

(1) For the past three years winters have been unusually mild. Judging by present indications, the winter now in progress is of the same character: we have already reached the half-way mark, but snow depths in the Adirondacks are well below what is normal for this time of year. Unless the character of the winter changes radically for the worse and thereafter continues to be severe for at least six weeks, deer mortality as a result of winter kill will be negligible.

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SCATTER SHOTS

notes of general interest

ONEIDA ICE FISHING

Game Protector George Gibbs of Constantia has come up with some interesting notes on the ice fishing at Oneida Lake. To say the least, it's flourishing as it never did before.

Some Sundays as many as 5,000 fishermen are out on the lake. And they're getting fairly good catches—including yellow perch, pikeperch, great northern pike, lawyers, catfish and silver bass. Six to eight fish per person is about the average catch; maybe three pike a season.

The fishermen are using all kinds of rigs from hand lines to tip-ups of various descriptions. A lot of them are using the plain, old-fashioned stick tip-up with a wire stapled on.

The minnow favored for bait is the buckeye shiner or emerald minnow. Cars are lined up for three-quarters of a mile at the bait dispensers'. There isn't time to count out the bait so it's being sold for $1 a pint (the fishermen being the gainer on such a deal). Some of the bait goes wholesale into Rochester and Binghamton. And it doesn't make any difference what the time of day is—the bait seekers are there as early as 5 a. m. or as late as 8 p. m.

The motor traffic along the north shore of the lake is particularly heavy on Sunday mornings—so heavy that a couple of deputy sheriffs are out to handle it. One Sunday morning there were 300 cars parked between Constantia and Cleveland, a distance of six miles.

Oneida Lake is certainly a bountiful producer of fish and fun—year 'round.

SCHOOL WORK

The eighth grade students of the Ella Van Hoesen Elementary School, State University of New York at Cortland, have made the conservation problem the focal point for their studies this year. To better understand the problem, they planned field trips, studied films and tape recordings, studied the New York State CONSERVATIONIST and searched our texts and newspapers for references to conservation practices.

All these activities were directed toward a series of radio programs which was inaugurated shortly before Christmas vacation over WKRT, Cortland. The children co-operated in writing the scripts and producing the dramatizations. The first radio skit was concerned with the plight of a family living on sub-marginal lands. Copies of this script may be secured from the Ella Van Hoesen Elementary School, State University of New York at Cortland.

—WILLIAM OLCOTT

THAT KINKAJOU

On page 40 of our last issue, Clayt Seagears referred briefly to what was then a complete mystery—the taking of a 6½-pound South American kinkajou (above) by a hunter in the hills west of Albany.

The mystery has since been cleared up, or at least part of it has. Letters from Kay Kapp and Bill Wimsatt, respectively of Cornell's Departments of Conservation and Zoology, both stated that the kinkajou undoubtedly belonged to Dr. Shirley Gage whose home, "West Wind Farm," is west of Albany but who now is on medical service with the Army in Korea. She obtained the kinkajou in Panama last spring. The animal was allowed to roam freely, and wandered off and never returned soon after Dr. Gage left for Korea.

As nearly as can be determined it was taken about four miles from her home and about a week after it wandered away. A trapper saw it four successive days and had been trying to take it alive in a box trap when a hunter shot it.

That explains the origin of the kinkajou. But it doesn't explain how the animal (whose brethren normally require a lot of coddling even in the best kept zoos) managed to survive an abnormally cold week in New York woods. Yet it was healthy and stuffed with wild food, not handouts, when taken.

FOR BAIT FISHERMEN

In the recent Convention Issue of the Federation News (official organ of the Quebec Federation of Fish and Game Association, Inc.) there is a resolution quoted as adopted at the November Convention, as follows: "Whereas the introduction of a foreign species of fish to a water may be extremely detrimental to the native game fish: And whereas fishing with live minnows is likely to result in introducing such foreign species: Be it resolved that with the exception of the area within ten miles of the Ottawa and St. Lawrence rivers, minnows may be used only in waters from which they were taken."

As in our own Adirondack area, native brook trout waters in parts of Canada have suffered from unwise liberation of unused live bait.

This year's syllabus will carry a list of brook trout waters in which use of minnows or other fish as bait will be prohibited as provided by section 212, subdivision 8, applying to waters to be listed within counties of St. Lawrence, Franklin, Clinton and Essex. The new law will help, but will not cover all waters where liberation of unused bait fish is a recognized menace. So, whether or not the new law covers your favorite fishing spot, it is still better to be careful to liberate no fish of any kind except in waters from which they were ob-

IT'S A LYNX, FOR SURE

One of the most interesting byproducts of this magazine is the information we get from our subscribers. As a result of this information, many "records" have been corrected, many "facts" brought into line. A case in point is the history of the lynx in New York; until the photographs above arrived, we thought that the lynx taken in Washington County this fall (see last issue, p. 40) was the first record since 1907. We were wrong. These photographs were sent us by Gilbert Nessel of Rome, and show a lynx killed Dec. 15, 1916, near Westernville by George Van Vleck, who was tracking what he thought a bear when his dogs treed this animal. Van Vleck then shot it. A member of the party was Fred Widrig, now living in Lee Center.

tained. While it may appear to be a kind act to turn loose your bait fish rather than destroy them, please do not overlook the very real danger that a pail of the wrong kind of fish may be the fatal blow to your favorite trout pond. (And most any kind—even golden shiners—is the wrong kind for trout ponds).

This admonition is particularly important with regard to those Adirondack ponds which have been treated with rotenone and then stocked. No minnows, please.

AGED LAKE TROUT

Last fall, one of the oldest lake trout recorded in New York was captured and released in Raquette Lake—for the third time in his life. When the trout's acquaintance was first made in October, 1941, a metal tag Number A2030 was inserted in the base of his dorsal fin. At that time, he was eight years old, 19½ inches long and weighed 2 pounds 9 ounces. He was taken again in the nets in the fall of 1942. Measurements made then showed that he was one-quarter of an inch longer and weighed four ounces less than when taken the previous year.

After eluding fishermen's lures and nets for nine years, this trout was captured for a third time during test netting operations in October, 1951. By this time, he was 18 years old, 21 inches long and weighed 3 pounds and two ounces. It may come somewhat as a surprise that in the ten-year period from 1941 to 1951, the trout had grown only 1½ inches in length and 9 ounces in weight. Nevertheless, the facts are clear.

If any fisherman should have further contact with A2030, the Department would be glad to hear about it.

SKIING FOR BEGINNERS

The Whiteface Mountain Authority has completed a new school slope for beginners in skiing at the Whiteface Mountain Ski Center near Wilmington. The new slope, which is located close to the lodge now under reconstruction (see last issue) will serve ideally for children and others who want instruction when taking up the sport of skiing.

The area, which was prepared with a bulldozer, has a gradual slope leading down to a runout which will allow for safe stops and, presumably, a minimum of spills. The slope was limed, fertilized, seeded and mulched with hay this fall. This will assure earlier growth of grass next spring, and so protect the slope from eroding.

CATERPILLARS

Plans have been made by the Bureau of Forest Pest Control for an insect egg count survey in the forest tent caterpillar outbreak reported last summer from Franklin and St. Lawrence counties (see photo p. 23, Aug.-Sept. '51). Purpose of this survey is to forecast the intensity of any outbreak by this insect that might occur in 1952 in the same area that was defoliated in 1951. About 110,000 acres were involved in the 1951 infested area.

SPRAYING RESULTS

During the past spring and summer seasons, the Bureau of Forest Pest Control, in co-operation with the United States Department of Agriculture and the New York State Science Service, sprayed approximately 650 acres of white pine and Norway spruce plantation for the control of the white pine weevil and also sprayed about 80 acres of red pine plantation for the control of the European pine shoot moth. Results are now reportable.

The spray for the weevil was applied by helicopter at the dosage rate of two pounds of D.D.T. in two gallons of oil solution per acre. Field checks made early in the fall showed only about 2 per cent weeviling during 1951 on the sprayed plot, while an unsprayed check plot had a 1951 weeviling of 46 per cent. It will be necessary that further annual surveys be made of this sprayed area in order to determine the rate of infiltration of the insect back in to the treated area. It appears, however, that the experiment was successful.

The application used against the European pine shoot moth was made by a fixed wing Stearman biplane at the dosage rate of four pounds of D.D.T. in four gallons of water emulsion per acre. A recent survey showed that this application reduced the number of infested buds by 70 per cent over those in an untreated plot. But due to the limited acerage sprayed in this experiment, the procedure and application that were tried are not being recommended for general control use until further tests can be made.

WILL THERE BE A BEAVER SEASON?

Yes. It has been ordered that beaver may be taken: March 1 through March 10 — Allegany, Broome, Cattaraugus, Chautauqua, Chemung, Delaware, Dutchess, Schuyler, Steuben, Tioga, Tompkins, Orange, Putnam, Ulster, Westchester, Yates. (Season limit 4.)

March 15 through March 31—Clinton; Essex, east and north of Route 28N; Franklin, east of Route 10; Hamilton and Herkimer, south of Route 8; Jefferson; Lewis; Oneida; Oswego; St. Lawrence, north and west of Route 11; Warren, east of Hudson River. (Season bag limit 8.)

March 15 through April 15—Essex, west and south of Route 28N; Franklin, west of Route 10; Hamilton and Herkimer, north of Route 8; St. Lawrence, south and east of Route 11; Warren, west of Hudson River. Exception: No trapping in posted blow down areas after March 31. (Season bag limit 12.)

March 15 through April 5—Albany, Cayuga, Chenango, Columbia, Cortland, Fulton, Greene, Madison, Onondaga, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Washington. (Season bag limit 6.)

The open season for the taking of otter is the same open season fixed for the taking of beaver in the following counties or parts of such counties: Cayuga, Clinton, Dutchess, Essex, Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Orange, Oswego, Putnam, St. Lawrence, Saratoga, Ulster, Warren, Westchester. The season bag limit 6.

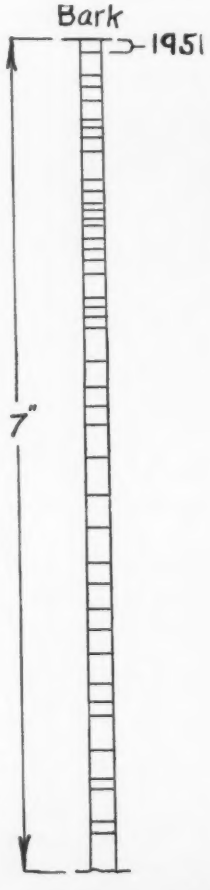
MORAVIA'S BIG TREE

by
William M. Harlow

In the quiet little Town of Moravia, a few miles south of central New York's Finger Lake Owasco, there stands a large conifer with deciduous feathery foliage. Mr. Henry H. Cameron bought the property on which the tree stands in 1947, and fell heir to the town tradition about the tree's origin.

It seems that Dr. Cyrus Powers in 1873 journeyed to the Holy Land, and upon his return to Moravia opened a long package encased in lead foil (tea lead) From it he carefully removed a small tree, and with several people as witnesses, planted it. An old gentleman now in his eighties remembers that his father sent him for a pail of water which was poured around the base of the little tree. Dr. Powers impressed upon the by-standers that this was no ordinary tree. Since that time, it has been supposed that the young tree was a Cedar of Lebanon, but Cedars of Lebanon have evergreen needles borne singly on the new growth, and clustered on short spurs on the previous season's twigs. Dr. Powers' tree is quite different.

The Moravian big tree actually is a baldcypress, native to the swamps of our own country's southeastern coastal plain. So we now have a first class mystery. The townspeople are sure that their big tree came from Palestine. But the baldcypress does not grow there, although it might have been introduced from our country.



The tree and its present owner, Mr. Cameron

In any event, the big tree of Moravia has not only survived the cold and drought of some 77 northern winters, but it has actually thrived. This tree is about 70 feet high, and has a well developed crown. At four and one-half feet above the ground, the circumference of the trunk is 10 feet, which gives it a diameter of about 38 inches, and a yearly average diameter growth of nearly one-half inch. The core from a seven inch increment boring shows 43 annual rings, and it can be seen that although the rings have been getting narrower, the tree has produced several that are between one-quarter and five-sixteenths of an inch in width.

It would be interesting to know whether or not this is the largest baldcypress to be found so far north and inland from the Atlantic coastal plain. At the present time, in any case, we have no records of a bigger one—and certainly none of a more interesting specimen.

THE 1951 DEER TAKE

(1) REPORTED TAKE

Deer hunters enjoyed a longer opportunity to get their bucks during the 1951 fall hunting season than ever before because of the lengthened season in the Central and Western part of the State. The portion of the State below the Adirondack Region had a uniform late November-early December season from November 22 to December 6. The buck kill was the highest ever reported during a season when only antlered deer were legal game.

This was in spite of the fact that Adirondack hunters suffered a setback during the first part of November, when snows of eight to 14 inches kept campers out of the woods for a week or more. The bad weather in the Adirondacks probably caused some reduction in the total take, and certainly a shifting of heavier hunting pressure toward mid-November.

During the season reports of illegal killing of deer, with the animals left lying in the woods, came from every part of the State. This wave of lawlessness, poor sportsmanship and wanton waste defied the best efforts put forth by already overworked Game Protectors and their supervisors. In one portion of Albany County a Conservation Department crew surveying for forest insect pests found an average of two dead antlerless deer per square mile. Another survey by game management men in the Connecticut Hill section of Tompkins and Schuyler counties showed the dead does and fawns left lying in the woods to number as many as the buck deer killed and removed. A small portion of Chenango County yielded 150 does and fawns brought in by Protectors and Sheriffs.

The past deer season then, was not one of unmixed pleasure to Department personnel, sportsmen and landowners. It is very clear that an intensive campaign must be carried on by responsible citizens to eliminate this sort of lawlessness—if only to insure the future of the sport of hunting in this State.

(2) CHECKING THE FIGURES

Ever since the special license required for taking deer in New York was established in 1926, part of each license has been designated as a stub to be filled out by successful hunters and returned to the Conservation Department as a report of deer taken. The number of these stubs sent in each year has been considered as the legal deer take. It has been known, however, that many hunters have not complied with this feature of the law and that, accordingly, the kill figures have been very conservative.

Last fall it was decided to obtain data that would indicate the proportion of successful deer hunters (who take deer under license) who fail to return their license to the Department. Game Protectors and other field men throughout the State were asked to record as many successful hunters as possible without alerting them to the fact that anything unusual was going on. These lists were then checked against the license stubs received. Of a total of 3,905 hunters, 2,797, or 71.6 per cent, were found to have sent in their license stubs.

Further analysis of these data will be given in a later issue.

CHAUNCEY HAMMOND

Conservation lost one of its best friends, and one of the greatest advocates it has ever had in the Legislature, with the passing of Senator Shauncey B. Hammond on February eleventh.

Death came to "Chan" as he was affectionately known to thousands, a short time after he left the Monday night session. It came just as he would have had it —while in the harness—and among the scenes and associates he so heartily enjoyed.

A list of all the conservation bills he sponsored would look like a copy of the Legislative index. The trademark Hammond-Demo, Hammond-Ostertag, Hammond-Lawrence etc. came to be synonymous with good progressive conservation legislation. He would sponsor no other kind.

Among his greatest conservation measures we think of two which will provide him with lasting, living monuments of the first magnitude—the Hammond-Demo bill which became our famous Forest Practice Act, and the Hammond-Ostertag bill which is making history as our new Pollution Control Law.

But at this moment the loss which his passing means to conservation is overshadowed by what it means to us to lose such a great and good friend. Perhaps that is the greatest tribute of all.

ADIRONDACK REGION

County	1949	1950	1951
Clinton	126	123	132
Essex	847	739	677
Franklin	973	1,024	1,081
Fulton	84	62	74
Hamilton	1,176	1,095	1,064
Herkimer	513	518	482
Jefferson	50	43	33
Lewis	349	301	347
Oneida	168	133	179
Oswego	149	104	104
St. Lawrence	1,057	1,251	1,406
Saratoga	138	111	114
Warren	315	285	315
Washington	167	175	.....
TOTALS	6,112	5,964	6,008

CATSKILL REGION

County	1949	1950	1951
Albany	132	139	175
Columbia	348	301	425
Delaware	977	979	1,173
Dutchess	352	448	484
Greene	493	554	626
Orange	432	404	447
Otsego	507	513	643
Putnam	185	162	208
Rensselaer	151	171	161
Rockland	126	86	103
Schenectady	46	40	21
Schoharie	380	383	458
Sullivan	1,269	1,333	1,302
Ulster	651	660	754
Washington	.....	.....	223
Westchester	10	17	26
TOTALS	6,059	6,190	7,229

CENTRAL AND WESTERN

County	1949	1950	1951
Allegany	852	1,694*	816
Broome	322	750*	489
Cattaraugus	1,032	1,321*	1,109
Cayuga	112	396*	130
Chautauqua	608	858*	813
Chemung	395	780*	329
Chenango	432	1,105*	681
Cortland	259	536*	342
Erie	179	308*	255
Genesee	95	226*	126
Livingston	209	503*	288
Madison	245	207	304
Monroe	91	228*	78
Niagara	28	54*	48
Onondaga	98	215*	120
Ontario	213	412*	268
Orleans	84	179*	71
Schuyler	259	565*	258
Seneca	61	95*	83
Steuben	842	1,620*	882
Tioga	378	1,044*	433
Tompkins	287	715*	338
Wayne	116	247*	95
Wyoming	148	319*	266
Yates	247	657*	186
TOTALS	7,592	15,034	8,808

* Counties with Deer-of-either-sex Season.

	1949	1950	1951
GRAND TOTALS	19,763	27,188	22,045

FOR YOUR INFORMATION

COYOTE BOUNTIES

The coyote has had a price on his head in certain parts of the Adirondacks for a good many years. Nevertheless, three counties—St. Lawrence, Lewis, and Franklin—which have paid bounties for the past five years consecutively, still show an increasing population of coyotes. This increase, although slow, appears to have been steady, but it is now taking place in the interior rather than in the coyotes' preferred range along the outer Adirondacks. In the perimeter regions trappers and hunters have taken a constant toll.

Nevertheless, throughout the Adirondacks, the coyote tends to desert the interior wilderness areas in favor of better pickings around the fringes of civilization. Evidently, they are confirmed rovers, coming out of the woods and making appearances at new points from time to time. Until 1949, the majority of those turned in for bounties were shot during the deer season, but since then trappers have accounted for a great majority of the bounty claims.

As yet, no fair comparison can be drawn between counties with regard to the success of bounty payments. The amount of the bounty, as well as the lands accessible to trappers, vary between counties, and furthermore the coyote continues to range according to his choice. It seems, however, that the siren song of the coyote is heard more often in the counties paying the highest rewards.

COYOTE BOUNTY RECORDS

COUNTY	1951 Bounty	COYOTES TAKEN 46–47	47–48	48–49	49–50	50–51
St. Lawrence	$50	19	16	23	39	35
Lewis	$25	10	15	6	10	11
Jefferson	$35	..	2	8	0	0
Franklin	$35	5	6	9	3	5
Warren	$75	..	1	1	3	14
Hamilton	$25*	..	..	5	5	1
Washington	$35	..	..	..	1	0

* Paid to county residents only.
Note: Saratoga County pays a $35 bounty, but records of payment are incomplete.

OUR SOIL RESOURCES

Although we are harvesting better crops than our grandfathers did, the productivity of our soils has decreased. In polite society that statement might be called a paradox. Most folks would simply say it's a case where figures don't lie but liars do figure.

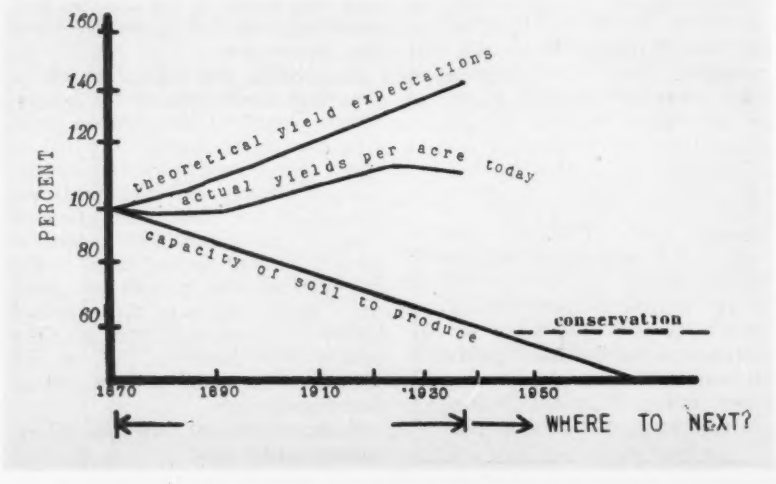
Farming in the 1950's is a lot different than it was in the 1870's. We use vast amounts of commercial fertilizer, whereas Grandfather didn't use any. Our seed varieties are better—hybrid corn is said to have increased average yields 25 per cent. Now we have better control of insects—DDT practically doubled potato yields. Modern equipment makes it possible to do work in a hurry and get crops in on time. We are farming land that is more suitable for crops; most of the rich prairies have been opened up since 1870 and many rocky hill sides that were formerly in cropland are now abandoned.

According to some carefully conducted studies, improvements in farming methods should have increased acre yields by 50 per cent or more. The actual yield increase has been about 13 per cent. Thus, in spite of all the money that has been spent for fertilizer, seed, pest control and equipment, we have only slightly more than counterbalanced the decline in the ability of the soil to produce.

In view of our rapid increase in population this is not a comforting situation. It's true that we can expect further scientific developments that will have a beneficial effect on crop yields. But today we have almost no virgin lands in reserve and every year erosion removes more topsoil. You can fool with Nature only about so long, and when enough soil goes down the creek, modern farming methods are useless.

So the question is "Where do we go from here?" Shall we continue to permit our soil resources to decline and expect new developments to maintain crop yields? Or will we use land properly, maintain organic matter and control erosion so that we may take advantage of present and future developments? It's up to us to decide.

—Hugh Wilson



SALVAGE REPORT (7)

On March 1, 1951, the first nine bids for the salvage of the blown down timber on the Forest Preserve were opened in the office of the Conservation Department. Of these, four were accepted and the remaining five rejected because the prices were deemed to be too low by the Technical Advisory Committee and the Department.

As the year progressed, however, additional contracts were advertised, bid and executed each month until, after only ten months, on December 31, 1951 a total of 110 different contracts had been approved. In addition, 50 projects had been laid out and advertised, all of which will be readvertised during the late winter. These together make a total of 160 projects which at this time appear to include practically all of the areas salvageable by contract. Additional small areas may be located from time to time, but the major portion is included in the above total. These are summarized as follows:

	Contracts Executed	Contracts Unsold	Total
Number of projects	110	50	160
Acreage	92,960	75,675	168,635
Cords	214,220	231,231	445,451
MBF	23,055	10,320	33,375
Estimated receipts	$913,530	$833,164	$1,746,694

The total estimated receipts for the contracts executed is based on the actual bid prices; that for the unsold contracts, on the average bid prices applied to the estimated quantities of material advertised. Experience to date indicates that the receipts will over-run at least 30 per cent because of the difficulty in making accurate estimates of the various quantities. This would indicate that the eventual return to the State from the 160 jobs should be upwards of $2,250,000.

At the end of the ten-month period, work was in progress on 76 of the 110 contracts; 14,672 acres had been worked over; 103,000 cords of pulpwood and 6,861 MBF of sawtimber cut and scaled. In addition, the Department had made 104 local sales of small amounts (where the quantity did not justify the cost of advertising) at an average return of about $100 per sale. The total receipts to December 31 from all sources are as follows. From 76 blow-down contracts, $389,480.62; from 104 local sales, $10,095.07; total sales, $399,575.69.

This does not include the estimated value of 536,000 board feet of sawtimber removed from public campsites and sawed into lumber for use of the Department. At current prices, this timber is estimated at $48,480.

A. S. Hopkins, *Director,*
Division of Lands and Forests

FOREST GENERAL FOREMAN

Salary: $3,036 at time of appointment and increases by five annual increments to a maximum of $3,726. (In addition, a cost of living bonus for 1951-52.)
Civil Service Status: Non-competitive classification. No competitive examination.
Positions (Number and Location): The number fluctuates, but there are, on the average, a total of 15 Forest General Foremen in the State.
Promotion Opportunities: There is no direct line of promotion from this position. Forest General Foremen who possess the qualification requirements can compete in open competitive civil service examinations for District Ranger and for the entrance level professional forestry position of Junor Forester.
Working Conditions: Work is performed out-of-doors the year round. The basic working week is six days and 48 hours. Employees earn 24 days vacation each year and earn one day of sick leave credit each month. Unused sick leave may be accumulated to a maximum of 150 days. Reimbursement is made for expenses.
Retirement: Membership in Retirement System compulsory. Employee contributes on a payroll deduction basis. Variety of retirement benefits are offered.
Duties: Under supervision of a District Forester, or Forester, is in charge of labor crews engaged in the various operations involved in the maintenance, operation and protection of State forests, such as thinning, pruning, improvement cutting, lumbering, tree planting, etc. Constructing fire lines, truck trails, water holes, small dams, fences, and simple structures. On occasion, supervising crews engaged in forest pest and forest fire control. Keeping time records, progress reports.
Qualification Requirements: *Physical:* Good physical condition, and freedom from any disabling mental or physical defects. *Education:* Graduation from a standard senior high school or equivalent education. *Experience:* Four years of satisfactory experience in forestry, lumbering, or landscape work, of which two years must have been in a supervisory capacity. *Note:* Graduation from the New York State Ranger School may be substituted for the two years of the required general, non-supervisory experience. Graduation from a four-year college course with a degree in forestry may be substituted for two years of the required general, non-supervisory experience plus one year of the required supervisory experience.
Special Knowledges and Skills: Good knowledge of forestry or lumbering operations, and general woods work. Ability to organize the work of labor crews and to secure maximum results from their efforts. Ability to train men in the work and in safe methods of performing various operations. Skill in carpentry, masonry, or general construction work is a desirable asset.
Next Issue: *Fish Hatchery Foreman*

TREE ORDERS

A total of 7,300 tree orders now has been received from landowners for 31 million trees. Our Bureau of Nurseries points out that this represents a sizeable increase in orders over this same period in 1951.

Although orders for this spring have been coming into the office since last August, there are still available substantial quantities of three species—white pine, red pine and Japanese larch. You still may order your trees.

IN CASE YOU DON'T KNOW

One inch of rain falling on one square mile totals 17 million gallons. Thus a county like Montgomery with an average annual rainfall of 40 inches gets 700 million gallons per square mile per year, or 286 billion gallons per year for the county (409 square miles).

LETTERS TO THE EDITOR

SPORTSMAN—LANDOWNER

Gentlemen: I had a subscription last year and renewed in early October. This renewal probably went in along with some fifty more from the Torrington Fish and Game Club Secretary. I found your magazine so instructive and readable that my club voted to send gift subscriptions to each landowner who allowed his land to be used for regulated permit shooting. As a club-landowner public relations effort, it was highly successful.

As in all heavy shooting pressure areas, we have our share of troubles with keeping land open. I believe a series of articles telling of successful club-farmer cooperation stories, and how accomplished, would be very informative.

Charles R. Chidester, President,
Torrington Fish and Game Club, Connecticut

WITHOUT MAP OR COMPASS

Dear Sirs: Three probably very good woodsmen wrote in to you with reference to your article "With Map and Compass." They offered good ways to get out of the woods if lost, if a person has a compass or a watch.

Since the November storm, the best way I know of getting out of the woods without a map, compass, or a watch is to take a look at the trees that the big storm blew down. The tops all point to the west, because the wind that blew them down was an east wind. Even if you aren't lost you can tell the direction quickly and fairly accurately.

Francis Buff, Watervliet

● *In general, you're right. But we know of a good many sizeable areas where the trees felled by this storm lie in the opposite direction, probably because of suction created by the wind as it swept over high ridges or mountains. In addition, storms before and since the hurricane (the latest, a 90 mph breeze that hit parts of the Adirondacks in mid-January) have scattered trees in all directions.—Editor*

THE GREAT BEAR TAMER

Dear Editor: The article on "Traps" was of much interest to me. I am fortunate to own a copy of "The Trappers Guide" by Newhouse 1869. One trap not described in your article is Newhouse's No. 6, "The Great Bear Tamer," jaw spread 16", double spring, each six pounds —total weight with chain 42 lbs.

There is quite an article telling what advantages the trap had, how it could be used to exterminate ferocious animals in all parts of the world, etc. Ending, it states: "There is not an animal living that can defy it, unless it is the Elephant, whose foot may be too large for it; and even the Elephant, taken by the trunk, would have to succumb. It is safer and far more sure and effectual than firearms in encounters with any of these monsters; and ought to be put in the very front of the battle of Man against the savages of the forest and the desert. . . ."

C. H. Pulver, Vestal

EATING CROW

Dear Sir: In your interesting and informative number of October-November 1951 under "James Hy Q Crow" appears this statement: "We understand, however, that crows (rooks) are commonly cooked in Europe." Is the writer in error in thinking that the rook is a bird different from the crow, and choice eating?

I myself have never seen crows served as food, though when ten years old, in league with our Irish cook who joined in the conspiracy, I persuaded the waitress to serve roast crows to my governess in the guise of wild duck.

Senton Jevons, Halesite

● *Nope, we know that the bald-faced, pouched rook is different from the crow although a very close relative, as are those European cousins, the raven and the jackdaw. I understand that both are eaten in Europe, and I also understand that the rook is a bit more on the delectable side (if any) since he is considered a bit more of a vegetarian than James Hy Q.*

Hope your governess never lost her taste for canvasbacks.—Clayt Seagears

BRUSH PILES

Dear Sirs: Here at the Museum we maintain a small sanctuary. We feel that you made quite a mistake when you suggested that making brush piles is beneficial. We find that they harbor many injurious insects. We would suggest that a honeysuckle tangle would be better. (Dec.-Jan. Page 11).

Jonathan Smith, Director,
Brook and Field Museum, New York City

● *Our Bureau of Forest Management says that although brush piles do harbor insects, they are not of a type injurious to the forest.—Editor*

THE AGE OF TREES

Dear Sir: On page 57 of "Camping and Woodcraft" by Kephart, there appears the following quotation: "More than four hundred years ago it was mentioned by Leonardo da Vinci, that universal genius who was scarcely less celebrated as an engineer and scientist than as an artist and literateur: "The rings of trees," wrote Leonardo, "show how many years they have lived and their greater or smaller size shows whether the years were damper or drier. They also show the direction in which they were turned, because they are larger on the north side than on the south, and for this reason the center of the tree is nearer the bark on the south than on the north side."

In 1893 this matter was put to a definite test by the New York State Forest Commission, which directed its foresters to examine the regularity of the northward thickening of annual rings in the black spruce of the Adirondacks. The foresters examined 700 trees, of varying exposure, noting in each case the compass-point toward which the longest radius of wood growth pointed. The result was:

North	471	South	1
Northeast ..	81	Southeast ..	0
East	106	West	27
		Southwest ..	6
Total north and east..	658	Northwest ..	8
	94%	Total south and west..	42
			6%

W. M. Harlow, Professor of Wood Technology,
Syracuse College of Forestry

LOG RULES

Gentlemen: In the October-November 1951 issue of *The Conservationist* there is an article on log ruling in which a comparison is made between the Vermont, Scribner C and the Doyle rule. I am familiar with both the Scribner C and the Doyle rule but would like to obtain some data on the Vermont rule. If possible I would like to have the formula covering this rule as well as a table compiled from the formula for different log diameters and lengths. We are selling some logs from our Water Supply plantations in Westchester and Putnam Counties and we wish to scale them according to the Vermont rule.

Leo P. Flood, Salvage Engineer,
New York City Department of Purchase

● *We can provide mimeographed sheets showing the Vermont rule and the formula from which it is derived; also log scales for Doyle, Scribner C and International. The last is as near to an official log rule as New York has ever gotten, and the law says it shall be used unless there is a specific agreement to the contrary.—Editor*

MONTEZUMA REFUGE

Dear Sir: I just finished reading an editorial in the "National Parks" magazine entitled "Let's Save The Montezuma Refuge."

Since I've been taking *The Conservationist* I haven't seen this issue mentioned. Why?

Donald L. MacMurray, Snyder

● *Regarding the Conservation Department's interest and responsibilities here, the following facts apply:*

1. Montezuma Refuge is not under the jurisdiction of the Conservation Department, and the Conservation Department has no authority in policy matters relating to its maintenance and operation. Montezuma is a Federal area under the jurisdiction of the United States Fish and Wildlife Service of the Department of the Interior.

2. The Department was not consulted about the proposed Thruway construction project through the refuge.

3. The Fish and Wildlife Service, which will continue to operate this refuge, says it is satisfied with the provisions the Thruway agreed to carry out in connection with this project. Apparently, the Service does not forsee the unfavorable effects some people have conjured up for this project. The Service should be in a position to know.—Editor

HEADS, YOU WIN

Dear Sirs: What's all the fuss about the wolves, wild dogs and bobcats for any way? You haven't seen anything yet.

Two years ago I shot a bobcat up near Tony Deepe's lodge in North River. I sent the hide together with the head to a taxidermist to have the head mounted and the skin tanned. In due time I received the head back. A while later along came the skin, but with the head still on it. If that isn't a two-headed bobcat I'll eat it.

L. Paul Wood, Jr., Hammondsport

GERMAN OAKS

Dear Mr. Littlefield: I was very agreeably surprised in reading your splendid article "Oaks" in *The Conservationist*, August-September 1951 issue. You mention Wilhelm Pickhardt [who introduced the "German" oak near Schroon Lake.—Ed.]. He was my uncle, being my father's (Carl Pickhardt) older brother.

It happens that I have a summer home in Dorset, Vermont and have raised there a few rather nice oaks from acorns. I would, naturally, like to have a remembrance of my uncle in the form of a "German Oak". To that end, I hope that Mrs. Pickhardt and I might make a trip into that area which you write about; apparently near Schroon Lake.

Dr. Otto C. Pickhardt, New York City

● *Mr. Littlefield has arranged a meeting.—Editor*

LAMPREY EELS

Gentlemen: I understand that lamprey eels are being used as bait in some of our lakes and streams. Is it not about time this practice was stopped?

Warren M. Robinson, Hoosick Falls

Dear Sir: I have used lamprey eels for bait—the small ones that were dug out of the mud in certain places in the Delaware River, not resembling at all the large lamprey that come upstream in the spring. I do say that these large ones lay the eggs for those small ones, and they change at a certain size into the regular silver eels.

I have seen in the ones I used for bait the change already started in the larger ones—the eyes forming deep under the skin and the mouth starting to change. These small ones (what we call lampreys) do not resemble the larger ones (silver eels) as to color or length. It's a sure thing that those small ones do not come upstream but are hatched from some sort of eggs layed by those big lampreys.

George I. Hutson, Oneonta

● *We have no reason to believe that lampreys have become established in new waters as a result of using their larvae for bait. The larvae are usually dug from mud banks and probably cannot long survive in open water. Thus, their use as bait may constitute a valuable and potent control method. (The law specifiies that only larvae—not adults—maybe used for bait.*

So far as is known, life history of the lamprey is as follows: (1) They spawn in bowl-shaped nests which they dig in the gravel of stream beds; (2) the young burrow into the mud banks where they live and grow for at least four, probably five years; (3) they then change into adult form, developing the equipment for their parasitic life: (4) after one and one-half to three years of preying upon fish they mature, migrate up into some gravelly stream, and spawn; (5) very soon after spawning, they die.—C. W. Greene

THESE ARE MARSH HAWKS

Dear Sir: We read and enjoy your magazine and seldom question the information it gives. However, with many others, we do not believe the picture (p. 32, Aug.-Sept. issue) of small blue herons in nest is accurate. I believe they are marsh hawks.

Enclosed are snapshots of such hawks found on a grassy hummock in a swamp where I was building a fence. These definitely grew up to be hawks.

Robert H. McNinch, Belmont

SALUTATION

Dear Editor: MAY I SALUTE YOU?

The gloom of the world is but a shadow. For behind it, yet within our reach is joy. There is radiance and glory in the darkness, could we but see—and your publication is teaching us TO SEE, TO ENJOY AND TO UNDERSTAND; TO APPRECIATE and TO USE TO ADVANTAGE our natural resources. THAT IS CONSERVATION.

Don Maxwell, Pres.,
Bird Club of Westfield, N. J.

JERSEY GETS INTO THE ACT

Gentlemen: Move over, you New York and Pennsylvania jellyfish, and make room for some Jersey jellies. In a small lake near Ogdensburg, off route 23, they were having a pulsating picnic one day last year. (See p. 39, Dec.-Jan. 51-52. —Ed.)

On second thought New York comes out with the last laugh. Everytime I mention fishing in Ogdensburg, someone says, "That's way up-state on the St. Lawrence, isn't it?"

William S. Preston, New York City

REPORT ON THE SEASON

Gentlemen: No luck, no buck. Local people of Fullerville (Gouverneur RFD) said the warden is doing a fine job there. I met wardens twice, checking cars at Lake George and on Taconic Parkway. They impressed me as capable and courteous. Their car-check was plenty thorough, but polite. When they had time to chat, they seemed to like their jobs and gave us a sales talk about writing the Conservation Department in case we wanted help or advice.

The men in the field bear out the friendly attitude of your magazine. There were ten of us on the three weekend hunts. From all ten, thanks.

Everett E. Hale, Garden City

● *From all here, thanks.—Editor*

THE PEOPLE AND THE LAW

Dear Sir: Director Mahoney's article, "There Oughta Be a Law," points up a growing misconception of the function of our civil servants; theirs is not to rule. No matter how well Mr. Mahoney runs his Division, nor how great is his knowledge of conservation problems, the introduction of legislation and the formulation of law is still a function of all the people and their elected representatives. We are glad to have Mr. Mahoney and his knowledge to help us, but we reserve all of our rights to vote, to introduce legislation and to make mistakes.

Admittedly it is old fashioned and inefficient. But it is also American and democratic and we like it.

Francis J. Clifford, Maj.MC,
Fort Devens, Mass.

PORCUPINE DAMAGE

Dear Editor: I have seen the destructive results of hungry porcupines on car, truck and trailer tires. They actually eat the tire and tube until it is flat. I am wondering if there is a substance that can be painted on the tires, or some other treatment known that will prevent this.

Carl Arra, Newburgh

● *We understand something of the sort has been developed in Massachusetts, but only to protect wooden material. So far as we know, the most effective method of eliminating porcupine damage is to eliminate the porcupines.—Editor*

CHRISTMAS, N. Y. TO FLORIDA

Dear Sir: It might interest you to know that the Christmas trees being sold here this year are from New York State, and with the red tags of the N. Y. State Conservation Department attached.

I. S. Stivers, Ex-Forest Ranger,
Samoset, Fla.

● *Thinnings from State Forests. Thanks for the information.—Editor*

SUBSCRIPTION LIST

Dear Editor: If I had the money I should like to send *Conservationist* subscriptions to the following: All Doe Killers—hoping they might learn to look for horns; All "Sound Shots"—hoping they might learn care; All "Shoot First and Look Afterwards" boys—hoping they might learn to conserve our game; All "Game Hogs"—hoping they might learn a little forbearance; All "Goons"—hoping they might learn to have common sense; All Deer Chasers With Dogs—of whom there were plenty in the Southern Tier this past fall.

G. W. MacLaughlin, Camillus

N.B. I don't have that much money.

HOW HIGH IS A DEER?

Gentlemen: Recently we had an argument pertaining to the average height of the New York State buck. Maybe you can help us. (1) What is the average height of the New York State buck? (2) What is the average height of the New York State deer—buck or doe?

We would like measurements from ground to back.

Winfred Burrell, Potsdam

● *Our records, based on 201 doe, indicate the average height of the Adirondack female is 36.11 inches at the top of the shoulder. For bucks, based on 73 specimens, the figure is 37.30 inches. Near enough?—Editor*

A GOOD GAMBLE

Dear Sir: I have a $5 bet with a fellow worker. He claims that the deer season opened on Thanksgiving Day in the Southern Tier for the last seven years with the exception of one year. I claim he is wrong. The five will be used for a subscription to *The Conservationist* to the Akron Central School.

Steve Fagullar, Jr., Akron

● *The school wins.—Editor*

BINDING JOB

Gentlemen: Would you tell me please where I can obtain binders for our copies of *The Conservationist*? We enjoy the magazine very much and would like to keep the individual copies for our children.

M. F. Keppler, Akron

Dear Sir: Last spring I asked about the quality of the book binding done by the young man referred to in your April-May *Conservationist*. (Ronald DeBock, 3185 Dewey Ave., Rochester —a Boy Scout working with his father's help for a merit badge in bookbinding). Your response was glowing and I immediately contacted Mr. DeBock with the result that my entire five-year batch of *Conservationists* was bound. I am telling you this because it was a perfectly wonderful job and appears to be done in a manner which will last a great many years.

Thanks for the tip, and I hope many more of your readers were wise enough to take advantage of it.

Henry C. Schlichting, Tuckahoe

PLANTING FOR DUCKS

Dear Mr. Seagears: The article "Dividends in Ducks" sounds good and goes along with a thought I have had in mind for some time regarding black ducks on the Fulton Chain of lakes.

For the past few years, during the duck season, I have counted 150 to 300 blacks in a single day on First, Second and Third Lakes. Have often wondered if there was more food available, if there wouldn't be more ducks in this area. There is at least one good size marsh on each of these lakes and to my knowledge, there is no wild rice in any of them. The food these ducks seem to feed on is grass, water plants and lily roots in and near the marshes.

Am wondering if you could advise what kind of duck food could be planted in this area, such as wild rice, duck potatoes, etc.

Harold Luther, Utica

● *The plants present are the climax species (what you end up with, no matter with what you start) in the aquatic environment you have there. If the area were suitable for other aquatics, the chances are very good that they would be there naturally. Department technicians who have been surveying such areas feel that planting is rarely called for; in fact, there are few justifiable situations for planting aquatics. One is when you restore a species formerly present, the disappearance of which was caused by a change in conditions which has been corrected, and the environment restored to its original status. Another is where you have complete control of water levels which permits drawndown, the planting of millet on mud flats, and then reflooding.—R. A. Wells*

SNAFU

Dear Sirs: My name is Casimer V. Szczepanski. I have been getting your magazine since it has been published. Somehow your mailing list has fowled up and I have received your magazine as Casimer Vszczepanski.

I have renewed my subscription in September in my right name and last month I received two magazines. One was sent to me as Casimer V. Szczepanski and one as Casimer Vszczepanski. Please correct this and see that I receive my full two year subscription as I haven't been able to make use of two magazines of the same kind.

Casimer V. Szczepanski, Rochester

P.S. My name is hard enough to say as it is. Please don't make it more difficult.

ON THE AIR

Dear Editor: You will be interested in knowing that I use items from your pages for my weekly radio programme, *Conservation Calling*, on the local station. The broadcasts are done as a hobby, but your items are heard by people in this far corner of the continent.

Bill Ward, Game Warden,
Kamloops, British Columbia, Canada

KOREAN PHEASANT

Dear Editor: I would like to let you (and the pheasant hunters of the State) know of the good hunting they are missing by not being here in Chunchon, Korea.

The pheasant here appears to be much larger than birds of the States. The Korean people do not hunt them on such a scale as we do. The average size of cocks seems to be between five and six pounds, dressed. When cooked the meat was very tender, and would indicate that the birds were not very old. The natural habitat of the birds is excellent in several respects; there are few natural enemies such as weasels, hawks, mink and fox.

It doesn't seem possible that game could survive under such adverse conditions as during the conflict, but nevertheless they are here and plenty of them. Other game consists of ducks, moose and deer.

Cpl. Bob Whalen,
c/o PM, San Francisco, Cal.

ADVICE ON WORMS

Dear Sir: Bruce Newman in his letter "Nightcrawlers" brought to our mind some amusing experiences of collecting and keeping worms, plus recollections of our neighbors thinking we had gone "bats" after seeing us on our hands and knees on the lawn when all sensible people should be in bed.

The best method we found for keeping them in condition ready for use was a large biscuit tin, perforated in the bottom and lid with a few tiny holes. Three parts fill the tin with clean moss. Place the worms in the tin making sure there are no damaged ones. Turn the tin upside down each day so that they scour themselves thoroughly. This will toughen them.

A little fresh milk sprinkled on the moss daily will keep them fed and have them shining like opals. The all important thing is to pick them over carefully each day and take out any dead ones, or the entire lot will soon be spoilt. Change the moss at least twice a week.

This is only the second copy of your splendid magazine we have seen. The attractiveness of the publication itself is a tonic to us.

Mr. & Mrs. David A. Lockyer,
Stubbs Cross, Ashford, Kent, England

IT'S NOT DYNAMITE

Dear Editor: The August-September *Conservationist* has just reached me up here in the Canadian bush and, as always, I have found it extremely interesting. After reading, "It's Dynamite" (page 30) I began to wonder if by chance radio transmitters present any danger of exploding the primers in shotgun and rifle ammunition. I would have supposed there is a considerable resemblance between primers and blasting caps, but since the blasting caps are electric probably only they are sensitive to radio energy. How about it?

Henry N. Jones, Cloyne,
Ontario, Canada

● *Apparently heat is generated by the electromagnetic waves put out by the transmitter. This heat may be conducted to electrically wired dynamite caps and may touch them off, but this couldn't happen to ammunition.—Editor*

DUCK LAW

Dear Sir: I hunt duck in a bay where the tides are very fast—almost impossible to row. My question is: Is it possible to retrieve a dead duck with an outboard? Also, is it possible to use the outboard to go after a cripple, then detach motor before using gun?

A. J. Clemente, Brooklyn

● *Federal regulations state: "Nothing herein shall exclude the picking up of injured or dead waterfowl, coot, rails or gallinules by means of motor boat, sailboat or other craft." But our interpretation is shoting from such a craft, even at a cripple, is not permitted.—Editor*

MOUNTING U. S. G. S. MAPS

Dear Sir: (1) For maps to be frequently used I cut into six sections along the latitude and longitude lines on the map. (See p. 33, Oct.-Nov. '51 issue.) (In some new maps these are omitted and only the crossing points marked.) These six sections are then mounted on cloth; unbleached muslin or dish cloth. There is left enough space between sections to fold so that the area you are interested in can be folded out. Such a map is thus pocket size. Several details add to its usefulness. Rubber cement is used so moisture will not destroy the paper to cloth bond. A scotch tape border is applied to stiffen and prevent raveling of the cloth. If dish cloth is used the color can be chosen to identify a certain area. Also its lines aid in mounting. The paper may be given a coat of spar varnish to further waterproof the map.

(2) For maps to be used only once or a few times. In this case the effort and expense of the first method is not justified. This second method makes use of double transparent page binders. These come in a wide variety of sizes and shapes all the way from one that will hold a full-sized quadrangle to a small one such as used to carry in the pocket for showing snapshots. The "top" maps are cut up into pieces of a size to fit in between the transparent pages. For use in a boat, the size may be suitable to lay out on your knees. For hiking it can be done in pocket size. Two or more folders may be kept on hand for different occasions. The map sections can be filed in envelopes and the sections desired fitted into the folder for each use. The only effort involved is cutting up the map. This method is splash, but not waterproof.

W. C. White, Schenectady

PANTHER?

Dear Sir: The best trapper I know (¼ Indian and well educated) is Ailen Nugent who runs a sporting camp on Chamberlain Lake, head of the Allagash River, northern Maine. Near Mud Pond Carry, three or four years ago he saw feline tracks as big as a saucer—much too big for cat or lynx. He is sure they were tracks of a panther. Woodsmen on the East Branch of the Penobscot about the same time heard screams they believed were those of a panther. From what I've heard I believe there was a panther in that country then.

L. H. Morehead, New York City

● *Could be. But a lynx can make tracks as big as a saucer.—Editor*

VIOLATION, OR DESECRATION?

Dear Sir: Your editorial "Violations" in the August-September issue is one of the very best on the subject I have ever read. An example of the ultimate in desecration by hunters seems to me to have been achieved in Greene County. Naturalist Vernon Haskins of Durham Center reports that the State's historical marker at Lamb's Corner has been riddled by high calibre bullets. Here is depravity at about its lowest depth.

All true sportsmen will fight against the lawless and degenerate bearers of guns who are infesting our forests and countrysides.

Arthur C. Mack, Hudson

TRESPASS

Dear Sirs; I would appreciate your telling me about our rights as property owners on posted land. A hunter deliberately shot and killed our pet cat on private property, not 500 feet from our house, cut of hunting season (Sunday, September 30), shot cat ten feet off road, had loaded gun in auto and stood on road to shoot. What are our rights? Can we force a trespasser to go to court or do we need a warrant? I would like to know more about the law in a case like this.

Lee Firstoss, Fultonville

● *A person trespassing on legally posted property is guilty of a misdemeanor, and you do not need a warrant to arrest a person for misdemeanor committed in your presence; you can arrest the person and arraign him before any Justice of the Peace.—Editor*

THAT DIME

Honored Sir: Please refer to the cut on page 34, column 3 of the December-January 1951-1952 issue of your valued magazine, and the accompanying note. This cut is purported to represent a dime—ten cents, one tenth of a dollar or half the current price of a nickel beer. May we point out that this metal piece is shown to be 1.0463 inches in diameter, whereas a current U. S. dime is .7013 inches. Despite the abrasion suffered while in the pheasant's gizzard, this sure was a big dime. It must date from the days of Cal Coolidge, when a dime was something. Or maybe it's a slug for a quarter machine.

You query as to why the pheasant picked up such an object. Don't be stupid. The little chickie, seeing what Truman is doing to the dollar, was trying to latch on to some hard money as a hedge against inflation. Smart bird!

A Friend

● *Whose friend? Everybody WE know grabs dimes as they come—without putting a micrometer on them.—Editor*

KING-SIZED COONS

Dear Sir: In the October-November 1950 issue (page 5) W. J. Hamilton states 'coons of 24 pounds are monsters. However, Clayt Seagears says in the February-March 1951 issue that 40 pound ringtails are not uncommon.

I am inclined to agree with Mr. Hamilton, but still wonder about the wide spread in the two articles.

James G. Parks, Ann Arbor, Mich.

● *Prof. Hamilton was right, and that was a typographical error in Mr. Seagears' copy; the 4 in 40 should have been a 2 in 20.—Editor*

ALEWIVES

Dear Editor: We have received several questions as to what is the cause of death of the numerous fish found each year in June on the south shore of Lake Ontario, from Rochester extending east about 18 miles on the shore. They are of varying sizes, with silver sides and a blue-black back. It has occurred to me that some information on this matter might be good to publish. If you will be so kind as to advise me concerning this problem it will be appreciated.

R. W. Duck, Managing Editor,
The Rural New Yorker

● *The fish are undoubtedly alewives, known also as saw-belly herrings and moon-eyes, but the cause of their death has never been definitely established. No disease or parasite seems to be responsible. It is possible, however, that as the spring advances and the alewives move from the cold, deep water in toward the shore, they are subjected to a stepping up of metabolism. It is known that fish require more food at higher temperatures, and if the additional food is not available or if the competition for it is too keen, many fish will die.—Editor*

INFECTED RABBITS

Gentlemen: Cottontail rabbits taken in the area of Broome County have a milky, detached parasite in the folds of the intestines. Of perhaps 10 rabbits taken around Chenango Bridge, all were so infected. Most were emaciated and torpid in action.

Can you advise me what the story is on these animals? We have thrown them away in disgust.

Howard W. Thomas, Jr., Binghamton

● *Probably the cyst stage of the dog tapeworm, although it rarely happens that the degree of infection is as severe as you describe, or as widespread. Other factors may be involved. Could you send one of these specimens (preferably packed in dry ice) to James Reilly, Wildlife Laboratory, Delmar, N. Y.?—Editor*

LOADED GUNS IN CAR

Dear Sir: There have been several opinions expressed on the law of not having guns loaded in the automobile. I was wondering if the law has a right to fine an individual for having a loaded gun in his auto while the vehicle is on his own property, not on the public highway?

Carlos D. Atkyns, Beaver Meadow

● *It doesn't matter where the car is; except for the military, etc., you can't have a loaded gun in it other than a properly licensed pistol or revolver.—Editor*

RIGHT OF SEARCH

Gentlemen: I would appreciate it if you would settle a debate for me. It is with regard to the duties of a Game Warden in New York State. In particular, I would like to know if he has the authority to stop a car on a public thoroughfare, or to search a man while hunting in the field.

George A. Wood, Saugerties

● *He may stop a car, and search it. In fact, his right of search is unlimited except that before searching a dwelling he must obtain a warrant. —Editor*

CREDITS

Second cover, W. S. Carpenter, Wm. D. Mulholland; pages 8, 9, 10, Victor Schwentker; page 11, Alfred Perlmutter; pages, 12, 13, 15, 22, 23, 29, Fred Everett; pages 18, 35, Fred Chambers; pages 19, 20, 21, Landscape Bureau, Department of Public Works; page 24, Louis Agassiz Fuertes; pages 25, 30, Earl McGuirk; pages 26, 27, Mabel Tacey; page 32, J. Victor Skiff, Wm. Harlow; page 34, Dr. Robert N. Salter.

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Marten Problem

THE pine marten or American sable is a very valuable three-pound furbearer with a nasty disposition toward other marten except in July which is when they woo. This late date seems to be dandy for wild marten but curiously it zeros the profits of what might be a business as important as U. S. mink farming, which last year turned over a rather amazing $40,000,000.

Marten are exceedingly rare in the United States. So it's nice to know that a pretty fair slug of them, rigidly protected, still holds out in the Adirondacks. In fact more may be running around there today than in the whole remainder of this nation east of the Rockies. Of course nobody really knows for sure.

Nobody knows much for sure about marten anyway. Except that it would be profitable, perhaps extremely so, to raise them on fur farms. They're worth a lot more than mink. They can be fed as cheaply. Individually they're far more interesting and attractive and the possibility of developing highly valuable color mutations would seem to be excellent.

But no dice—and don't you think the problem hasn't been kicking around a long time, either.

Marten are more durable in captivity than mink and they live much longer—possibly even 20 years! Also there's no major difficulty breeding them.

But then nothing hoppen. Only one small litter averaging 2½ young per eight or more bred females is normal par for the course. Commercially, such very low productivity is a decidedly limiting factor. No such reproductive difficulty occurs among wild marten or the tribe would have been extinct long ago. So just what's the difficulty with captive animals?

Much research to solve the problem has been accomplished, mostly in New York at the now defunct U. S. Fur Animal Experiment Station at Saratoga.

For years it was believed that marten mated in February or March. But the researchers at Saratoga established definitely that marten mate in July and whelp in April, thus having a gestation period of nearly nine months. Captive mink on the other hand are bred about March 10 and whelp less than two months later.

This curiously long marten gestation results, it was discovered, from a delayed implantation of the egg cell. In other words, fertilization occurs in July but growth of the embryo does not begin until much later—after February 19. So the researchers determined that the bug in breeding marten was the still unknown factor which in captive animals prevents start of the growth in February of the long-fertilized egg.

At first they thought that correction of possible deficiencies of exercise and nutrition might solve the problem. Several years of work on that turned up nothing. Then they figured they'd attempt to reduce the opportunity for the unknown bug to operate simply by shortening the time between breeding and the start of the embryo's development. They planned to take as much of the delay as possible out of the delayed implantation.

So the amazing effect of manipulated light on animals was tried (More Than Meets the Eye—THE CONSERVATIONIST, Feb.-Mar. 1950). Eight of the Saratoga females were normally bred in July. Then, beginning September 21, they were subjected to gradually increased amounts of electric light per day to simulate the increasing daylight hours of spring. On December 19, four months ahead of schedule, one female whelped a healthy litter! Only four failed to respond.

Further development of the lighting technique plus whatever else the biologists might turn up looked like a new lease on life for marten and a big boost for the fur business.

But nothing cooked. Three or four years ago, jurisdiction of the important Saratoga plant was transferred from the U. S. Fish & Wildlife Service (concerned only with *wild* animals) to the Bureau of Animal Industry in the U. S. Department of Agriculture. Then in December, 1951—a couple of months ago—bang came a government order to knock all the Saratoga fur animals in the head (all but the mink which went to Cornell) and abandon the whole plant which had been operating more than 30 years.

Of course there may have been a perfectly justifiable reason for this sudden move. But not knowing it, the action didn't make sense to us. Saratoga, as far as we know, was the only specialized fur animal experiment plant of its kind in the nation—although there's one at Petersburg, Alaska — and the chopping off of its activity came at a time when the need for the development of fur farm techniques, especially for the rare and buffer species, seemed greater than ever. For instance the output of U. S. ranch-reared mink jumped from about 300,000 in 1940 to well over 2,000,000 last year with an average price for natural-color pelts of about $15 — approximately the production cost.

Anyway, 522 out of a total of 526 fine mutation foxes, bred after many years of careful fussing with genetics, were killed at Saratoga. So were all but nine of the rare marten.

What happened to the four remaining foxes (a pair each of strain-perpetuating pearl platinums and two outstanding so called white-marked) and those nine sables? We happily report that the Conservation Department has got 'em safely penned and, we hope, safely perpetuated at the Division of Conservation Education's native animal collection at the State Experimental Game Farm.

The U. S. Department of Agriculture by special concession permitted the Conservation Department to salvage the four foxes—at twenty bucks per salvage. And E. T. Clark of Goshen, sportsman and long interested in fur development, generously turned over the marten. He had obtained them—or their progenitors—in 1943 from Alaska and Canada at considerable personal expense for work at the Federal Saratoga plant in the first place.

Nothing by way of get can be got this year since only one of the four female marten was bred last summer at Saratoga. But those lights. Put down on your calendar to visit Delmar next fall and get a free sun bath while making li'l pals of what probably is now the most valuable captive sable collection in the nation.

THE Delmar martens were used as models for drawings on the front cover and opposite but coloring and markings were copied from an Adirondack pelt—taken last fall by a guy who said he thought he was shooting at a squirrel. The colored cover drawing was made from a male obtained as a pup in British Columbia in 1939. That now makes him 13 years old. In 1942 he killed a female intended as his mate. He is still very frisky. The drawing opposite is from a small Alaska-type female which has never had young although she has been bred several times. She was born at Saratoga in 1945, daughter of the male mentioned.

We are now even with the red squirrel pictured. Over a year ago its carcass was posed, to illustrate a story on the animal, in the act of eating a baby bird. Then it was frozen for future use. Finally it was thawed out and posed as victim itself of a predator higher up the scale.

—CLAYT SEAGEARS

MORE NIMBLE THAN THE RED SQUIRREL

ADIRONDACK MARTEN

BOBWHITE

Colinus virginianus virginianus (Linnaeus)
Male and female ½ nat. size

Courtesy

New York State Museum